



Technical Memorandum

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To: Ron Bard, Brown and Caldwell

From: Rose Lew Tsai-Le Whitson, Biologist

Erin Thatcher, Task Order Manager

Date: May 12, 2020

Subject: Critical Areas Memorandum – Maintenance Hole 25B Protection

- 2 The purpose of this memorandum is to provide documentation to support the critical areas land
- 3 use permit application for the temporary protection of King County Coal Creek Trunk
- 4 maintenance hole (MH) R13-25B (MH-25B) in Coal Creek in the City of Bellevue (City),
- 5 Washington.

6 PROJECT DESCRIPTION

- 7 King County Department of Natural Resources, Wastewater Treatment Division (WTD) conducts
- 8 regular monitoring of the condition of its assets, including MH-25B, along the Coal Creek Trunk
- 9 sanitary sewer. After high flows in winter 2019 to spring 2020, the WTD maintenance monitoring
- 10 team determined that scour along the Coal Creek stream bank may fully expose MH-25B
- 11 without immediate protection (**Photograph 1**). If MH-25B were to be fully exposed, it would
- 12 increase the risk of pipe failure and sewage release into Coal Creek, This MH, along with the
- 13 associated creek crossing, is scheduled to be removed by 2025 as part of the Coal Creek Trunk
- 14 Upgrade Project (currently in design). King County WTD is therefore proposing to temporarily
- protect the MH and stabilize the surrounding stream bank from further bank and bed scouring
- until the Coal Creek Trunk Upgrade Project is complete and the MH, the sewer pipe, and the
- 17 temporary protection can be removed. King County WTD contracted Brown and Caldwell and its
- 18 subconsultant Jacobs Engineering Group Inc. (Jacobs) to provide design and permit support for
- 19 this proposed action.
- 20 King County WTD proposes to install four bendway weirs (also known as rock barbs) along the
- 21 left stream bank to train the thalweg of Coal Creek towards the center of the stream. Left bank
- and right bank refer to the stream bank when facing downstream. To prevent scour, stone toe
- 23 protection will also be installed around the bendway weirs and partially into the stream channel.
- 24 The conceptual bank stabilization design is included as **Attachment 1**. The design team will
- refine impact area estimates and provide impact volume estimates as the design progresses.
- 26 The contractor will require a portion of the Red Cedar (Upper West Coal Creek) trailhead parking
- lot and the gravel ramp to the sediment pond for staging. The contractor will then use heavy
- 28 equipment no wider than 4 feet, such as a mini track loader, to transport materials from the
- 29 staging area to the construction site. For public safety, King County WTD proposes to close the

- 1 parking lot and trail system within the construction work limits (including the upper trail system
- 2 that connects to Forest Drive SE) during the week. The parking lot and the trail system will be
- 3 reopened on the weekends with construction equipment, staging, and the crossing by MH-25B
- 4 fenced off.
- 5 **Photograph 1:** MH-25B, taken by Jacobs from the upstream side of Coal Creek on March 16, 2020



PROJECT LOCATION

- 8 MH-25B is located within a permanent King County WTD easement in the Coal Creek Natural
- 9 Area (King County parcel 2124059001) near the Upper West Coal Creek Trail, along Coal Creek
- 10 Parkway SE. The property is located at 5433 Coal Creek Parkway SE and is owned and managed
- by the City's Parks and Recreation Department. MH-25B is on the left bank of Coal Creek as it
- 12 flows along the Upper West Coal Creek Trail.

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- 1 The project is located within the Coal Creek Basin (6th Field Hydrologic Unit Code 17110012)
- and within the Coal Creek Basin of Water Resource Inventory Area (WRIA) 8, the
- 3 Cedar/Sammamish Watershed, located in Section 21 of Township 24 North, Range 5 East,
- 4 Willamette Meridian.
- 5 See **Attachment 1** for a vicinity figure and project location figure.

6 EXISTING CONDITIONS

- 7 The City regulates streams, wetlands, geologic hazards, habitat associated with species of local
- 8 importance, and frequently flooded areas as critical areas (City Land Use Code 20.25H.025).
- 9 Jacobs reviewed publicly available resources and summarized fieldwork data gathered for the
- 10 Coal Creek Trunk Upgrade Project to provide the following critical areas summary. Attachment 1
- 11 shows critical areas within the project work limits.

12 Streams

- 13 Five streams have been identified in or proximal to the project work limits. Coal Creek and three
- 14 tributaries to Coal Creek (Tributary 0272, Tributary 0273, Tributary 1, and Tributary 2) were
- delineated by CH2M Hill Engineers, Inc. (now Jacobs) between February 2018 and September
- 16 2019 for the Coal Creek Trunk Upgrade Project. Tributary 0273 was not field-assessed because it
- 17 is outside of the project work limits for both this proposal and for the Coal Creek Trunk Upgrade
- 18 Project. Instead, Jacobs reviewed the Greater Coal Creek Basin map (City 2017) to identify the
- 19 stream type and the standard buffer. All streams are summarized in **Table 1**, with an information
- 20 table for Coal Creek below it.
- 21 Tributaries 0272, 1, and 2 are present within the work limits as closed-pipe culverts crossing the
- 22 proposed construction access route and within the proposed staging areas in the existing
- parking lot and along the existing Upper West Coal Creek Trail. The three tributaries and their
- 24 associated buffers will not be impacted by access or staging. Tributary 0273 and its buffer are
- 25 southeast of the project work limits and will not be impacted. These tributaries are therefore not
- 26 discussed further in this memorandum.

Table 1: Stream Summary

Stream Name	Flow Duration	Stream Type	Buffer Width (feet)	Stream will be Impacted	Buffer will be Impacted
Coal Creek	Perennial	F	100	Yes	Yes
Tributary 0272	Perennial	F	100	No ⁽¹⁾	No ⁽¹⁾
Tributary 0273	Perennial	F	100	No ⁽¹⁾	No ⁽¹⁾
Tributary 1	Perennial	F	100	No ⁽¹⁾	No ⁽¹⁾
Tributary 2	Perennial	F	100	No ⁽¹⁾	No ⁽¹⁾

28 <u>Notes</u> 29 ⁽¹⁾Con

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(1)Contractors will avoid this feature by accessing the work location and staging equipment along the existing paved parking lot and along the compacted dirt and gravel Upper West Coal Creek Trail.

	COAL CREEK – INFORMATION SUMMARY
Stream Name	Coal Creek
Bellevue Stream No.	84_04 (Spur)
Local Jurisdiction	City of Bellevue
WRIA,	8,
Drainage Basin	Cedar-Sammamish
City of Bellevue Stream Category	F
Buffer Width	100 feet (undeveloped site)
Documented Fish Use Within Study Area	Cutthroat trout (<i>Oncorhynchus clarkii</i>), rainbow trout and steelhead – winter run (<i>O. mykiss</i>), Chinook salmon (<i>O. tshawytscha</i>) – fall run, Coho salmon (<i>O. kisutch</i>), sockeye salmon (<i>O. nerka</i>), and bulltrout (<i>Salvelinus confluentus</i>) (City 2017; U.S. Fish and Wildlife Service, n.d.; Washington Department of Fish and Wildlife, n.d.)
Connectivity	Coal Creek has headwaters in Cougar Mountain Park and flows for approximately 7 miles into Lake Washington. Numerous small tributaries drain into Coal Creek.
Stream Condition	Open Channel, perennial, impaired for dissolved oxygen and bioassessment (Washington State Department of Ecology 2018)
Buffer Condition	Recreational-use park
Photograph	Coal Creek, looking upstream with MH-25B on the left bank (right of photograph; May 2019).

Wetlands

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- 2 Six wetlands have been identified in the study area or proximal to the study area during
- delineation field visits by CH2M (now Jacobs) between February 2018 and September 2019 for
- 4 the Coal Creek Trunk Upgrade Project. These wetlands include Wetlands A1, B, G, H, I, and J,
- 5 summarized in Table 2. Attachments 2 and 3 contain the data forms and rating forms,
- 6 respectively.
- 7 No wetlands will be impacted by the proposed action. Only the combined buffers of Wetlands H,
- 8 I, and J will be impacted; therefore, information summaries for Wetlands H, I, and J are provided
- 9 below. The other wetlands and associated buffers are adjacent to the existing parking lot and
- 10 along the existing Upper West Coal Creek Trail. Since construction access and staging will be
- 11 limited to existing impervious surfaces, these wetlands and buffers will not be impacted and are
- therefore not discussed further in this memorandum.

Table 2: Wetland Summary

Wetland Name	Wetland Category ⁽¹⁾	Habitat Score	Buffer Width (feet)	Wetland Impacted	Buffer Impacted	Original Delineation (Author, Date)	CH2M HILL Verification Date
A1	III	5	110	No	No	Grette Associates, LLC., 2015 (originally named Wetland A)	February 27, 2018
В	II	6	110	No	No	Grette Associates, LLC., 2015	February 27, 2018
G	III	5	110	No	No	CH2M HILL, fieldwork February 28, 2018 and April 18, 2019	Not applicable
Н	III	5	110	No	Yes	CH2M HILL, fieldwork April 18, 2019	Not applicable
I	III	5	110	No	Yes	CH2M HILL, fieldwork February 28, 2018	Not applicable
J	III	5	110	No	Yes	CH2M HILL, fieldwork February 28, 2018	Not applicable

¹⁴ Notes:

⁽¹⁾Wetland Category from the Washington State Department of Ecology's 2014 Wetland Rating System (Hruby 2014).

	WETLAND H – INFO	RMATION SUMMARY			
Location:	Section 21, Township 24N, Range	05E			
	· 美华里塔 (4) (6)	Local Jurisdiction	City of Bellevue		
		WRIA,	8,		
		Drainage Basin	Cedar-Sammamish		
	是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	City of Bellevue	III		
		and Ecology Rating	(Rated with Wetland I)		
		Buffer Width	110 feet		
		Wetland Size	0.02 acre		
		Cowardin			
		Classification	Palustrine scrub-shrub		
TAN A		HGM Classification	Depressional/Riverine		
		Wetland Data			
		Sheet(s)	WHSP1		
		Upland Data Sheet(s)	WHSP2		
Dominant Vegetation	Wetland H is a shrub-scrub wetla	nd dominated by salmon	berry and reed canarygrass.		
Soils	Alderwood sandy loam and Kitsal location. Soil pits confirmed sandy and clain indicative of wetland hydrology.				
Hydrology	Bank overflow from Coal Creek. T indicative of creek overflows into		eek and has drift deposits		
	Wetland Func	tions Summary			
Water Quality	Water Quality Functions Score: 6 Wetland H has a low site potentia quality functions. The wetland ha water quality improvement.	·			
Hydrologic	Hydrologic Functions Score: 5 Wetland H has low site and medium landscape potential to provide hydrologic functions. The wetland's main source of hydrology is bank overflow. The wetland has limited overbank flood storage but persistent vegetation to reduce water velocity.				
Habitat	Habitat Functions Score: 5 Wetland H has a moderate site pofunctions due to a low plant habit richness. Wetland H has a moderathere are wildlife corridors and co	at complexity, few hydro ate opportunity to provid	periods, and low species e habitat functions because		
Buffer Condition	The buffer is disturbed from the a development).				

Location: Section 21, Township 24N, Range 05E		WETLAND I – INFOR	RMATION SUMMARY				
WRIA, Drainage Basin Cedar-Sammamish City of Bellevue and Ecology Rating Buffer Width 110 feet Wetland Size: 0.31 acre Cowardin Classification HGM Classification Depressional/Riverine Wetland Data Sheet(s) WiSP1; WISP1 from 2018 has been replaced with WISP1 from 2019 Upland Data Sheet(s) WiSP2 Dominant Vegetation Wetland I is a scrub-shrub wetland dominated by salmonberry. Alderwood sandy loam and Kitsap soils, very steep, are mapped in the Wetland I location. Soil pit confirmed sand, loam, and sandy loams within the wetland with redoximorphic features indicative of wetland hydrology. Hydrology Drift deposits from Coal Creek are indicative of bank overflow. Wetland I has a low site potential and moderate landscape potential to provide water quality functions. The wetland has moderate overbank storage and persistent	Location:	Section 21, Township 24N, Range	9 05E				
Drainage Basin Cedar-Sammamish City of Bellevue and Ecology Rating (Rated with Wetland H) Buffer Width 110 feet Wetland Size: 0.31 acre Cowardin Classification Palustrine scrub-shrub HGM Classification Depressional/Riverine Wetland Data Sheet(s) WiSP1; WISP1 from 2018 has been replaced with WISP1 from 2019 Upland Data Sheet(s) WiSP2 Dominant Vegetation Alderwood sandy loam and Kitsap soils, very steep, are mapped in the Wetland I location. Soil pit confirmed sand, loam, and sandy loams within the wetland with redoximorphic features indicative of wetland hydrology. Hydrology Drift deposits from Coal Creek are indicative of bank overflow. Water Quality Functions Score: 6 Wetland I has a low site potential and moderate landscape potential to provide water quality functions. The wetland has moderate overbank storage and persistent			Local Jurisdiction	City of Bellevue			
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quality functions. The wetland has moderate overbank storage and persistent		Water Quality Functions Score: 6					
quality functions. The wetland has moderate overbank storage and persistent	Water Quality	•	· · ·				
vegetation that provides an opportunity for water quality improvement.							
		vegetation that provides an opportunity for water quality improvement.					
Hydrologic Functions Score: 5							
Hydrologic	Hydrologic	Wetland I has a low site and moderate landscape potential to provide hydrologic					
functions. The wetland's main source of hydrology is bank overflow. The wetland has	1.7	functions. The wetland's main source of hydrology is bank overflow. The wetland has					
		moderate overbank flood storage and persistent vegetation to reduce water velocity.					
Habitat Functions Score: 5							
		Wetland I has low site potential and low landscape potential to provide habitat					
Habitat functions due to low plant habitat complexity and species richness.	Habitat	functions due to low plant habitat	t complexity and species	richness.			
Wetland I has a moderate opportunity to provide habitat functions because there are				unctions because there are			
wildlife corridors and connections to other habitats.		wildlife corridors and connections	s to other habitats.				
Buffer Condition The buffer is disturbed from the adjacent development (Coal Creek Parkway and urban	Buffer Condition		djacent development (C	oal Creek Parkway and urban			
development).	Darrer Condition	development).					

Location: Section 21, Township 24N, Range 05E		WETLAND J – INFO	RMATION SUMMARY				
WRIA, B, Drainage Basin Cedar-Sammamish City of Bellevue and Ecology Rating Buffer Width 110 feet Wetland Size: 0.12 acre Cowardin Classification Palustrine emergent Classification Slope Wetland Data Sheet(s) WJSP1 Woter Quality Hydrology Water Quality Functions Score: 7 Wetland J has a moderate site and landscape potential to provide moderate water quality functions. The wetland has limited flood storage and persistent vegetation Hydrologic Functions Score: 5 Wetland J has a moderate site potential and low landscape potential to provide habitat functions Sue so to she habitat features. Wetland J has a moderate opportunity to provide habitat functions because there is disturbance in the buffer, and limited wildlife corridors and connections to other habitats. Witfer Condition Wetfand J has a low site potential and low landscape potential to provide habitat functions Sue so to she habitat features. Wetland J has a moderate opportunity to provide habitat functions because there is disturbance in the buffer, and limited wildlife corridors and connections to other habitats. Wetfer Condition The buffer is disturbed from the adjacent development (Coal Creek Parkway and urban) Water Condition The buffer is disturbed from the adjacent development (Coal Creek Parkway and urban)	Location:	Section 21, Township 24N, Range	e 05E				
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1 Geologic Hazard Areas

- 2 Shannon and Wilson, Inc. conducted site evaluations and reviewed existing geologic data for the
- 3 Coal Creek Trunk Upgrade Project (David Ward [Shannon and Wilson], personal communication
- 4 on April 28, 2020). There are no seismic hazards, landslide hazards, coal mine hazards, or
- 5 geologic hazard buffers within the proposed work limits.
- 6 A steep slope area extends across the trail between Tributary 1 and Wetland J. Work through this
- 7 area will be limited to materials transported using mini track loaders and mini excavators that
- 8 will stay within the footprint of the existing trail and will not impact this steep slope. Similarly,
- 9 the proposed bendway weirs and stone toe protection are just outside and below another steep
- 10 slope area. Since project actions along this side are limited to vegetation clearing and fill, with
- 11 little to no excavation needed to place the bendway weirs, no steep slope impacts are
- 12 anticipated at this location, either. Since geologic hazard areas will not be disturbed, they are not
- 13 discussed further.

14 Habitat Associated with Species of Local Importance

- 15 CH2M (now Jacobs) surveyed the study area on February 26 through 28, 2018, and on April 27,
- 16 2019, to characterize vegetation communities, identify concentrations of native and invasive
- 17 plant populations and other habitat features (such as snags and logs), assess habitat potential to
- support fish and wildlife species of local importance, and observe indications of use by these
- 19 species. No species of local importance were observed during these site visits. However,
- 20 spawning salmon and a great blue heron were observed in Coal Creek during a subsequent site
- visit in October 2019. In addition, numerous species may only use the study area seasonally or
- during migration; others may be very rare, cryptic, or nocturnal. Surveys were not conducted to
- 23 target specific species but focused on potentially suitable habitat and general habitat
- 24 characteristics.
- 25 The study area is characterized by undeveloped riparian habitats adjacent to Coal Creek. The
- 26 riparian habitat consists of deciduous forest, and dominant trees include black cottonwood
- 27 (Populus balsamifera) and red alder (Alnus rubra). Dominant understory plants include
- 28 salmonberry (Rubus spectabilis), vine maple (Acer circinatum), sword fern (Polystichum
- 29 munitum), piggy-back plant (*Tolmiea menziesii*), and reed canarygrass (*Phalaris arundinacea*).
- 30 Vegetation consists primarily of native plant species. Dominant invasive plant species consist of
- 31 Himalayan blackberry (*Rubus armeniacus*) and reed canarygrass.
- Table 3 lists the species of local importance and their potential occurrence in the study area.
- 33 Five species of local importance are present: pileated woodpecker, great blue heron, red-tailed
- 34 hawk, Chinook salmon, and Coho salmon. These have either been observed by CH2M or
- 35 documented present. Eleven species of local importance are potentially present because snags
- are present in the study area and there is high habitat connectivity between wetlands, streams,
- 37 and upland vegetation. Seven species of local importance are not likely to be present because

- 1 either the project is outside of their range or key habitat features are not present, such as cliffs
- 2 and saltwater bays.

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Table 3: Habitat Suitability for Species of Local Importance

Species of Local Importance	Occurrence in Study Area	Habitat Present (WDFW or fieldwork)
Bald eagle (Haliaeetus leucocephalus)	Potentially Present	Common throughout Puget Sound. Nests in large, mature trees near large bodies of water. No known nests in study area.
Peregrine falcon (Falco peregrinus)	Not Present	No mountains or cliffs present.
Common loon (Gavia immer)	Not Present	No forest lakes or bays present.
Pileated woodpecker (Dryocopus pileatus)	Documented Present	Confirmed breeding in King County. Suitable foraging habitat (snags) observed. Woodpeckers heard during surveys but species not confirmed. Documented to occur in Coal Creek Natural Area (The Cornell Lab of Ornithology, n.d.).
Vaux's swift (Chaetura vauxi)	Potentially Present	Potentially suitable habitat (tree snags) observed. Associated with old-growth forests.
Merlin (Falco columbarius)	Potentially Present	Winters in and migrates through King County. Suitable habitat observed (forest with open patches and perches for hunting and visibility).
Purple martin (Progne subis)	Potentially Present	Potential habitat (tree snags) are present but limited.
Western grebe (Aechmophorus occidentalis)	Not Present	No saltwater bays or large areas with a mixture of open water and emergent vegetation.
Great blue heron (Ardea herodias)	Documented Present	Observed in the study area in 2019 by CH2M (now Jacobs) during a site visit. Suitable habitat observed.
Osprey (Pandion haliaetus)	Potentially Present	Large forested areas with snags present near Lake Washington.
Green heron (Butorides striatus)	Potentially Present	Core areas of use include the Puget Sound Douglas fir zone.
Red-tailed hawk (Buteo jamaicensis)	Documented Present	Common in this area but prefers open ground for hunting, which is limited. Known to occur in the Coal Creek Natural Area (The Cornell Lab of Ornithology, n.d.).
Townsend's big-eared bat (Corynorhinus townsendii)	Potentially Present	Snags with cavities are likely present. Have been recorded in King County (WDFW 2013).
Keen's myotis (Myotis keenii)	Not Present	Have not been recorded in King County (WDFW 2013).

Table 3: Habitat Suitability for Species of Local Importance (continued)

Species of Local Importance	Occurrence in Study Area	Habitat Present (WDFW or fieldwork)
Long-legged myotis (Myotis volans)	Potentially Present	Inhabit riparian forests and have been recorded in King County (Hayes and Wiles 2013).
Long-eared myotis (Myotis evotis)	Potentially Present	Snags with cavities likely present and have been recorded in King County (Hayes and Wiles 2013).
Oregon spotted frog (Rana pretiosa)	Not Present	Unlikely. No suitable breeding habitat (large vegetated pools) and no documented breeding habitat within three miles.
Western toad (Anaxyrus boreas)	Potentially Present	Wetlands and still water off-channel habitat are present in area. Common in Washington.
western pond turtle (Clemmys marmorata)	Not Present	Although areas of open water are present, the site is not in the current range of western pond turtle.
Chinook salmon (Oncorhynchus tshawytscha)	Documented Present	Migration habitat as mapped by WDFW. Documented in Coal Creek. Suitable habitat observed.
Bull trout (Salvelinus confluentus)	Potentially Present	Potentially present according to USFWS. Mapped by the City. Limited suitable habitat observed.
Coho salmon (Oncorhynchus kisutch)	Documented Present	Spawning habitat documented and mapped by WDFW. Documented in Coal Creek. Suitable habitat observed.
River lamprey (Lampetra ayresi)	Not Present	Indicate whether present based off of City basin info

Notes:

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- 3 City = City of Bellevue
- 4 USFWS = U.S. Fish and Wildlife Service
- 5 WDFW = Washington Department of Fish and Wildlife

6 Frequently Flooded Areas

- 7 The proposed work will occur in and adjacent to the mapped 100-year floodplain of Coal Creek.
- 8 However, the 2005 Federal Emergency Management Agency floodplain boundaries are
- 9 imprecise and do not accurately represent frequently flooded areas within the study area. CH2M
- 10 (now Jacobs) is conducting a hydraulic analysis using updated hydraulic modeling to determine
- impacts relative to the base flood elevation as part of the Coal Creek Trunk Upgrade Project.
- 12 King County WTD will coordinate with the City floodplain administrator on both the temporary
- 13 condition based on the proposed MH-25B protection and the permanent proposed condition
- 14 based on the Coal Creek Trunk Upgrade Project.

IMPACTS

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- 2 There will be no permanent impacts to critical areas, and there will be no temporary impacts to
- 3 wetlands or geologic hazard areas. The proposed action will temporarily impact Coal Creek and
- 4 its buffer. Since the stream and stream buffer impact areas overlap with wetland buffer, habitat,
- 5 and frequently flooded areas, the impact assessment captures all temporary impacts to these
- 6 critical areas.
- 7 The impacts described below are based on conceptual design prepared on May 4, 2020
- 8 (Attachment 1). Due to the rapid timeline associated with this project, excavation and fill
- 9 quantity estimates have not yet been determined. Construction materials are also being refined
- 10 as design progresses. King County WTD will provide updates to regulatory agencies as
- 11 information becomes available.

12 Impact Minimization

- 13 King County WTD needs to provide temporary stabilization to the stream bank surrounding
- 14 MH-25B to avoid further bank and bed scouring that would fully expose MH-25B and to
- 15 minimize risk of the sewer pipe breaking and discharging sewage into Coal Creek. Impacts to
- 16 Coal Creek and its buffer are unavoidable because of the location of MH-25B and limited access
- 17 opportunities.

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- 18 KC WTD is minimizing impacts by implementing the following:
 - Work will be limited to the approved U.S. Army Corps of Engineers and WDFW in-water work window, anticipated to be between July 1 and August 31 of this year. This window also corresponds with the low-flow period for Coal Creek.
 - The duration of the work will consist of about 2 weeks of construction activity or the minimum necessary to complete the temporary stabilization work.
 - Qualified biologists will set block nets and remove fish from the reach in advance of
 construction, using the most up-to-date versions of WSDOT's 2016 Fish Exclusion
 Protocols and Standards and the U.S. Fish and Wildlife's Recommended Fish Exclusion,
 Capture, Handling, and Electroshocking Protocols and Standards (Brennan-Dubbs 2012).
 For conflicting measures, the most conservative approach will be used to protect listed
 species.
 - Daily construction equipment and personnel crossings through the Coal Creek streambed are necessary to access MH-25B, but they will be minimized to the greatest extent possible by coordinating on activity timing during safety coordination briefings each day.
- A biological monitor will be present for the duration of the work.
 - No trees will be removed as part of this work.

- Understory and ground cover vegetation clearing will be minimized to the greatest
 extent possible as design progresses.
 - Construction access will be limited to the Upper West Coal Creek Trailhead parking lot (5433 Coal Creek Parkway SE) and the existing compacted Coal Creek Trail, except for a small segment needed to cross from the trail on the right bank to the MH on the left bank of Coal Creek.
 - Staging will be limited to existing impervious surfaces.
 - All bank stabilization structures and fill are temporary and will be removed with MH-25B during the Coal Creek Trunk Upgrade Project in about 5 years.
- 10 King County WTD also compared impacts associated with managing baseflow during
- 11 construction by working in the wet and working in the dry. The thalweg of Coal Creek is almost
- 12 flush against the left bank by MH-25B, even during low-flow conditions. There are two potential
- methods for working in the dry: diverting by excavating an alternate channel or by setting up a
- 14 pump bypass.

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- 15 Diverting base flow would require excavating a diversion channel along the right bank of the
- 16 existing streambed. The construction limits would need to be expanded to implement this
- approach and would result in increased grading impacts to the Coal Creek streambed. Excavating
- the streambed for a diversion channel would mobilize multiple flushes of sediment.
- 19 Installing a pump bypass around the work area would also be impactful because it would require
- 20 placing a berm across the channel width for the duration of the work. The pump would also mix
- 21 water with sediment on the upstream side, resulting in continuous discharge of sediment on the
- downstream side. The pump would also need to be run continuously through use of a generator,
- which would result in elevated noise levels, even during the night.
- To avoid additional streambed impacts, King County WTD proposes to perform the temporary
- 25 bank stabilization construction in the wet by using temporary mats along the soil slopes and
- 26 partially in the stream channel. Using mats will reduce compaction for construction equipment
- to access the left bank. Block nets will be placed during active periods of construction to
- 28 minimize impacts to fish. The contractor will also minimize daily crossings by coordinating on
- 29 the timing of proposed actions during safety briefings at the start of each work day.

Short-Term Temporary Impacts

- 31 To access MH-25B, contractors will use a small track loader, less than 4 feet wide, to transport
- 32 materials from the parking lot staging area to the proposed stream, crossing along the 4-foot-
- wide existing compacted trail. The contractors will use the shortest crossing from the trail, which
- 34 will result in 403 square feet of temporary vegetation clearing impacts in combined wetland and
- 35 stream buffer. This area also includes the 100-year floodplain and habitat critical areas.

- 1 Temporarily impacted areas will be revegetated with native plantings to existing conditions or
- 2 better.
- 3 The contractor will also temporarily disturb approximately 326 square feet of the Coal Creek
- 4 streambed to access the left bank with a small excavator and with personnel on foot. No fill or
- 5 excavation will occur to access the left bank. King County WTD proposes to temporarily isolate
- 6 the affected stream reach with block nets and remove fish from the area prior to the start of
- 7 construction (approximately 160 linear feet).
- 8 These construction activities will take approximately 2 weeks to complete. If construction needs
- 9 to stop for more than 24 hours, such as for the City's request for weekend trail access, the block
- 10 nets will be removed for the duration of the stop and then reset with the fish removed from the
- 11 reach again prior to the restart of construction.

12 Long-Term Temporary Impacts

- 13 To stabilize the stream bank surrounding MH-25B, the scoured area behind the MH will be
- 14 refilled with clean materials, likely a mix of soil and Washington State Department of
- 15 Transportation (WSDOT) streambed sediment. Up to four bendway weirs consisting of WSDOT
- streambed boulders (two man sized) will be installed along the outside bank of the meander
- 17 bend in Coal Creek. Stone toe protection consisting of WSDOT rock for erosion and scour
- 18 protection will also be added to the upstream and downstream sides (to minimize risk of bank
- 19 protection flanking) and between each bendway weir (to reduce the risk of future bank scouring).
- 20 The bendway weirs were selected to train the thalweg away from the left bank. They will be field-
- 21 fitted during construction based on thalweg observations.
- 22 Appropriately-sized, clean, and water-rounded gravels (WSDOT streambed sediment) will then
- 23 be placed on the stone toe protection surface to provide suitable gravels for salmonid use.
- 24 Although fill volumes have not been calculated yet, King County WTD will coordinate with the
- 25 City to ensure little to no change in floodplain storage. These temporary bank stabilization
- 26 improvements will remain in Coal Creek for 5 years or until the Coal Creek Trunk Upgrade
- 27 Project is complete.
- 28 Construction materials and impact areas may change as design progresses. King County WTD
- 29 will coordinate with regulatory agencies as new information becomes available.

MITIGATION

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- 31 The proposed stabilization is a temporary measure necessary to reduce the risk of infrastructure
- 32 damage and sewage entering Coal Creek. While the interim condition will be slightly hardened to
- 33 protect MH-25B, these temporary stabilization installations will be wholly removed during the
- 34 Coal Creek Trunk Upgrade Project. The Coal Creek Trunk Upgrade Project will also include
- 35 several stream restoration elements, including removal of MH-25B and several pipe crossings
- 36 and installation of large woody structures to increase large woody material in the reach to the

- 1 75th percentile, as recommended by Fox and Bolton (2007). King County WTD is therefore not
- 2 proposing to provide mitigation.
- 3 During the interim, King County WTD will conduct annual monitoring to ensure that no fish
- 4 barriers form as a result of this action. King County WTD will establish one to three fixed photo
- 5 points for this purpose. Monitoring results will be made available to regulatory agencies upon
- 6 request. King County WTD will also coordinate with the appropriate regulatory agencies if
- 7 contingency measures are needed.

8 LIMITATIONS

- 9 This memorandum was prepared for the exclusive use of King County WTD and its
- 10 representatives. The findings and conclusions documented in this memorandum have been
- 11 prepared for specific application to this project. They have been developed in a manner
- 12 consistent with that level of care and skill normally exercised by members of the environmental
- 13 science profession currently practicing under similar conditions in the area. The conclusions and
- 14 recommendations presented in this report are professional opinions based on interpretation of
- information currently available to Jacobs and made within the operational scope, budget, and
- schedule constraints of the Project. No warranty, expressed or implied, is made.

17 **REFERENCES**

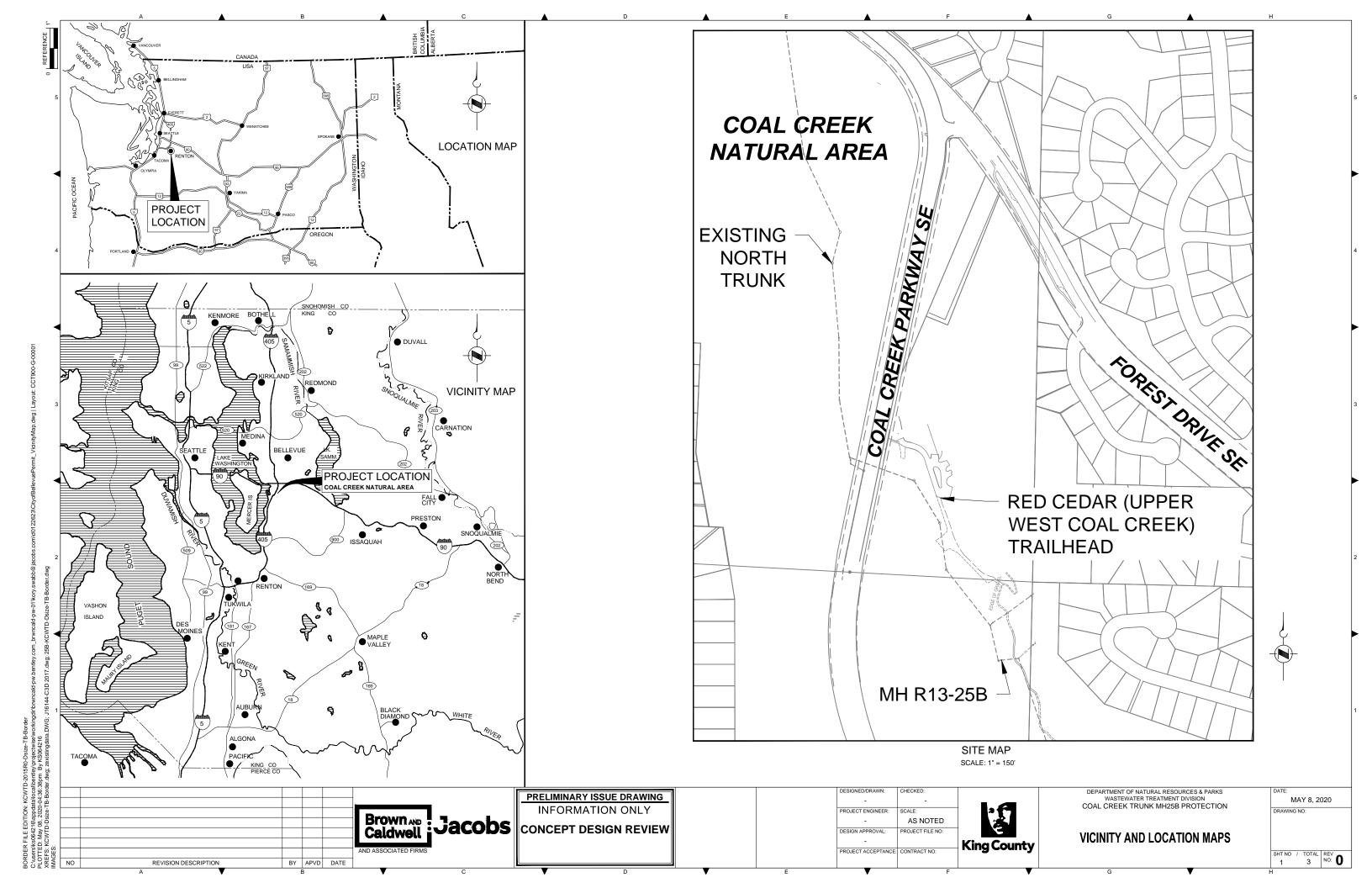
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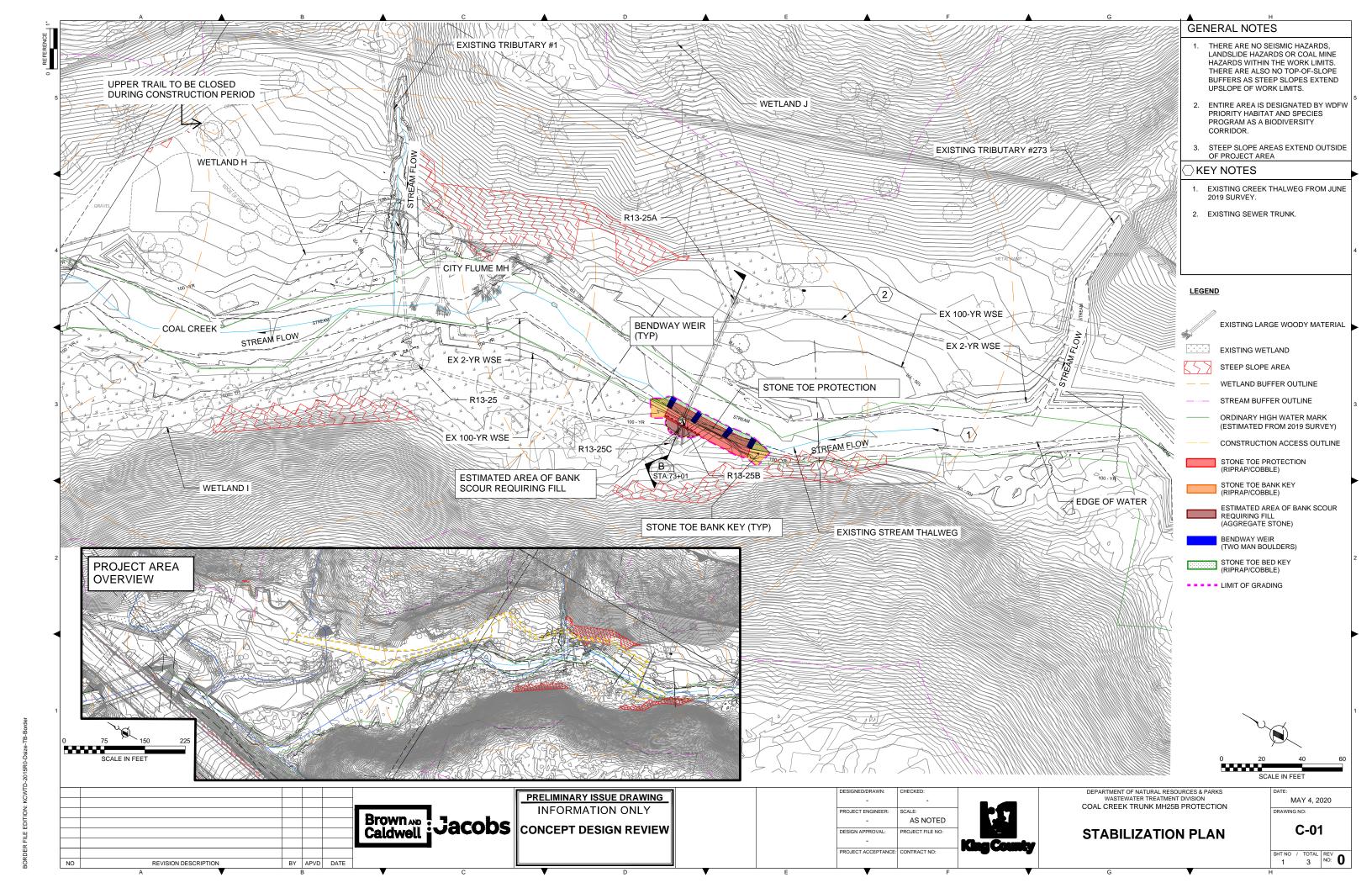
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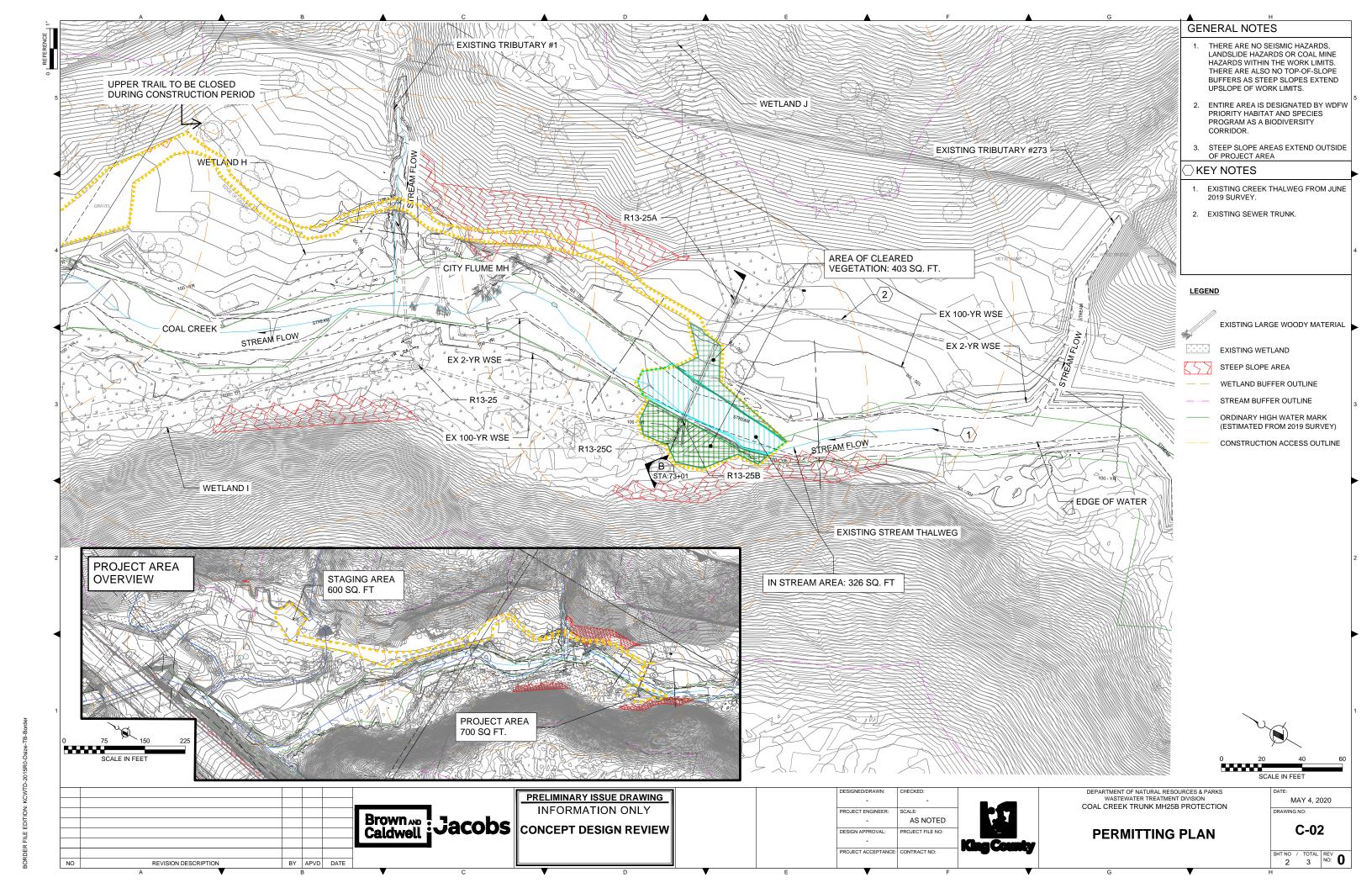
Critical Areas	Memorandum -	– Maintenance	Hole 251	B Prote	ction
			М	av 12, i	2020

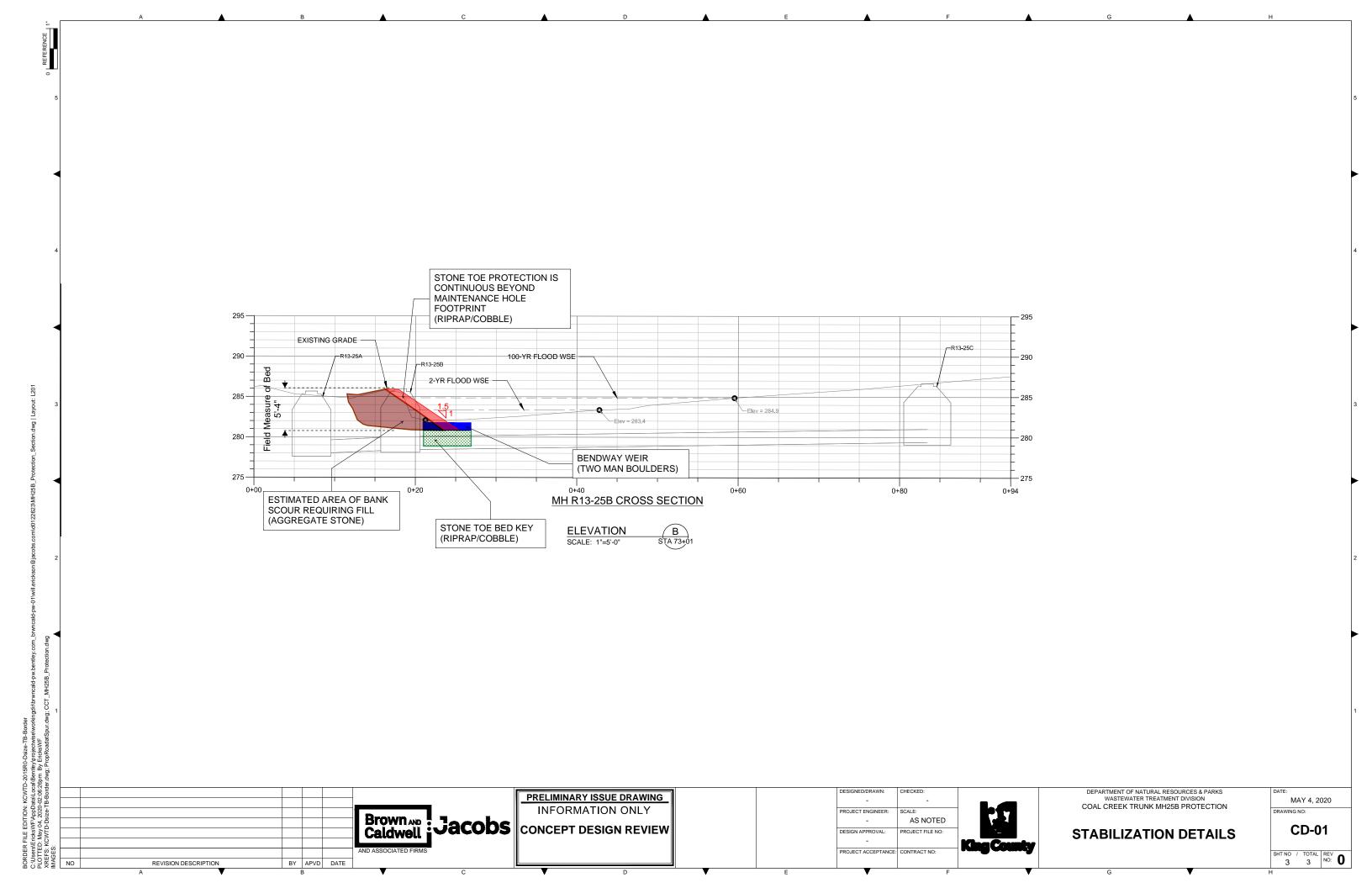
ATTACHMENT 1 CONCEPTUAL BANK STABILIZATION DESIGN

Crit	ical Areas Memorandum – Maintenance Hole 25B Protection May 12, 2020
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Jacobs Engineering Group Inc.	









ATTACHMENT 2 WETLAND DATA FORMS

Crit	ical Areas Memorandum – Maintenance Hole 25B Protection May 12, 2020
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WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade Applicant/Owner: King County Wastewater Treatment Division		(City/County: Bellevue/King Sampling Date: 2/27/18					
		Division			State: WA	Samplin	Sampling Point: WA/1SP1	
Investigator(s): Forrest Parsons, PWS/Suzanne Ball			_ Section, Township, Range: <u>S21 T24N R5E</u>					
Landform (hillslope, terrace, etc.): Ravir	ne	I	_ocal reli	ef (concave, c	convex, none): <u>Co</u>	ncave	Slope (%): <u>10</u>)
Subregion (LRR): A		Lat: <u>47°3</u>	3'15.04" <mark> </mark>	N	_ Long: <u>122° 9'58</u>	.38"W	Datum: WGS8	34
Soil Map Unit Name: Alderwood and Kit	sap soils, very	steep			NWI	classification: No	ne	
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes [⊠ No □	(If no, explain	in Remarks.)		
Are Vegetation ☐, Soil ☐, or Hydrolog	y 🗌 significantl	y disturbed?		Are "Normal (Circumstances" pro	esent? Yes	No □	
Are Vegetation ☐, Soil ☐, or Hydrology	y 🔲 naturally p	roblematic?		(If needed, ex	plain any answers	in Remarks.)		
SUMMARY OF FINDINGS – Att	ach site ma	p showing	sampli	ing point lo	ocations, tran	sects, import	tant features,	etc.
Hydrophytic Vegetation Present?	Yes ⊠	No 🗆		Is the Sample	ed Area			
Hydric Soil Present?	Yes ⊠	No 🗌	١,	within a Wetl	and? Y	es 🛛 No [
Wetland Hydrology Present?	Yes 🛚	No 🗌						
Remarks:								
Study Area 3								
\								
VEGETATION – Use scientific	names of p	lants.						
Total Olyadram (Distriction 00)		Absolute		ant Indicator	Dominance Tes	t worksheet:		
Tree Stratum (Plot size: 30')		% Cover			Number of Domi			
Salix scouleriana			<u>Y</u>	<u>FAC</u>	That Are OBL, F	ACW, or FAC:	<u>3</u> (A)	
2					Total Number of			
4			-		Species Across A	All Strata:	<u>3</u> (B)	
		<u>15</u>	= Total (Cover	Percent of Domir		400 (A/D)	
Onalina (Ohauh Ohauha)					That Are OBL, F	-	100 (A/B)	
Sapling/Shrub Stratum (Plot size: 15')					Prevalence Inde		NA - IC- b - b - c	
1			-			ver of:		
2							x 1 =	
3 4							x 2 =	
5							x 3 =	
		<u>0</u>	= Total (Cover			x 4 =	
Herb Stratum (Plot size: 5')							x 5 =	
Phalaris arundinacea		<u>75</u>	<u>Y</u>	<u>FACW</u>	Column Totals:	(A)	(B)
2. Juncus effusus		<u>25</u>	<u>Y</u>	<u>FACW</u>	Prevalence	Index = B/A =		
3								
4					Hydrophytic Ve	_		
5 6						st for Hydrophytic	Vegetation	
7					_	ce Test is >50% ce Index is ≤3.0¹		
8.					_		s ¹ (Provide suppor	rtina
9.					data in R	emarks or on a se	eparate sheet)	J
10						Non-Vascular Pla		
11							etation ¹ (Explain)	
		<u>100</u>	= Total (Cover	¹ Indicators of hyd present, unless of		and hydrology mus	st be
Woody Vine Stratum (Plataiza: 45")					prosont, unless t	iotarbea or proble	omano.	
Woody Vine Stratum (Plot size: 15')					Harden I II			
1					Hydrophytic Vegetation			
<u> </u>			T-1-14		Present?	Yes ⊠	No □	
		0	= Total (Cover			_	
% Bare ground in Herb Stratum <u>0</u>		<u>0</u>	= rotar (Cover		_		

SOIL Sampling Point WA/1SP1

	soription. (Describe	to the ac	purnecaca	to document ti	ie iliulcator	or confin	m tne abser	nce of indicators.))	
	Matrix			Redox F	eatures					
Depth	Color (moist)									
(inches)		<u>%</u>	Color (moist) %	Type ¹	Loc ²				
<u>0-7</u>	7.5YR 2/1	<u>100</u>					silty loam			
<u>7-14</u>	10YR 4/1	<u>95</u>	10YR 4/6	<u>5</u>	<u>C</u>	<u>M</u>	silty loam			
		· <u> </u>								
¹Type: C=0	Concentration, D=Dep	letion, RN	/I=Reduced	Matrix, CS=Cove	ered or Coate	ed Sand C	Grains.	² Location: P	L=Pore Linin	ng, M=Matrix.
	oil Indicators: (Applic							cators for Probler		
☐ Histos	sol (A1)		☐ Sand	dy Redox (S5)				2 cm Muck (A10)		
☐ Histic	Epipedon (A2)			ped Matrix (S6)				Red Parent Mater	rial (TF2)	
☐ Black	(Histic (A3)		☐ Loar	my Mucky Minera	al (F1) (exce	pt MLRA	1) 🗆	Very Shallow Dark	k Surface (TI	F12)
	ogen Sulfide (A4)		☐ Loar	my Gleyed Matrix	(F2)			Other (Explain in	Remarks)	
·	eted Below Dark Surfa	ce (A11)		leted Matrix (F3)						
	Dark Surface (A12)			ox Dark Surface	, ,			cators of hydrophy		
	ly Mucky Mineral (S1)			leted Dark Surfa				tland hydrology mu		nt,
	ly Gleyed Matrix (S4)		☐ Red	ox Depressions	(F8)		uni	ess disturbed or pr	robiematic.	
_	e Layer (if present):									
	de - V						Hydria	Soil Procent?	Voc ⊠	No 🗆
	ches):						nyuric .	Soil Present?	Yes ⊠	No 🗌
Remarks:										
HYDROL	LOGY									
	LOGY d Hydrology Indicato	rs:								
Wetland	d Hydrology Indicato		uired; check	all that apply)				Secondary Indica	ators (2 or m	ore required)
Wetland Primary	d Hydrology Indicato				Leaves (B9)	(except		Secondary Indica		
Wetland Primary ☐ Surfa	d Hydrology Indicato Indicators (minimum of ace Water (A1)] Water-Stained		(except		☐ Water-Staine	ed Leaves (B	
Wetland Primary ☐ Surfa ☑ High	d Hydrology Indicato Indicators (minimum of ace Water (A1) In Water Table (A2)			Water-Stained	, and 4B)	(except		☐ Water-Staine	ed Leaves (B	
Wetland Primary ☐ Surfa ☑ High ☑ Satu	d Hydrology Indicato Indicators (minimum of ace Water (A1) Mater Table (A2) Indicators (Minimum of ace Water (A2) Indicator (A3)			Water-Stained MLRA 1, 2, 4A Salt Crust (B1	a, and 4B)			Water-Staine 4A, and 4B) Drainage Pat	ed Leaves (B	9) (MLRA 1, 2,
Wetland Primary □ Surfa ⊠ High ⊠ Satu □ Wate	d Hydrology Indicato Indicators (minimum of ace Water (A1) In Water Table (A2) Irration (A3) er Marks (B1)			Water-Stained MLRA 1, 2, 4A Salt Crust (B1 ² Aquatic Inverte	a, and 4B) (b) (b))		Water-Staine 4A, and 4B) Drainage Par Dry-Season	ed Leaves (B tterns (B10) Water Table	9) (MLRA 1, 2, (C2)
Wetland Primary □ Surfa ⊠ High ⊠ Satu □ Wate □ Sedi	d Hydrology Indicato Indicators (minimum of ace Water (A1) N Water Table (A2) Uration (A3) er Marks (B1) iment Deposits (B2)			Water-Stained MLRA 1, 2, 4A Salt Crust (B1 Aquatic Inverte Hydrogen Sulfi	a, and 4B) b) b) c) c) c) de Odor (C1))	Roots (C3)	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi	ed Leaves (B tterns (B10) Water Table isible on Aeri	9) (MLRA 1, 2, (C2) al Imagery (C9)
Wetland Primary □ Surfa ⊠ High ⊠ Satu □ Wate □ Sedi □ Drift	d Hydrology Indicato Indicators (minimum of ace Water (A1) Water Table (A2) Uration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3)			Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo	a, and 4B) brates (B13) de Odor (C1 espheres alor)) ng Living I	Roots (C3)	Water-Staine 4A, and 4B) Drainage Pat Dry-Season Saturation Vi Geomorphic	ed Leaves (B tterns (B10) Water Table isible on Aeri Position (D2	9) (MLRA 1, 2, (C2) al Imagery (C9)
Wetland Primary □ Surfa □ High □ Satu □ Wate □ Sedi □ Drift □ Alga	d Hydrology Indicato Indicators (minimum of ace Water (A1) In Water Table (A2) Iration (A3) Iration (A3) Iration (B1) Iration (B2) Iration (B2) Iration (B3) Iration (B3) Iration (B4) Iration (B4)			Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re	de Odor (C1 ospheres aloreduced Iron) ng Living I (C4)		Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui	ed Leaves (B tterns (B10) Water Table isible on Aeri Position (D2) itard (D3)	9) (MLRA 1, 2, (C2) al Imagery (C9)
Wetland Primary □ Surfa ⋈ High ⋈ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron	d Hydrology Indicato Indicators (minimum of acce Water (A1) In Water Table (A2) Irration (A3) Irration (A3) Irration (B1) Irration Deposits (B2) Indicators (B3) Indicators (B4) Indicators (B			Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Ro Recent Iron Re	de A, and 4B) abbrates (B13) de Odor (C1 aspheres aloreduced Iron adduction in Ti) ng Living I (C4) illed Soils	(C6)	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral	ed Leaves (B tterns (B10) Water Table isible on Aeri Position (D2 itard (D3) Test (D5)	9) (MLRA 1, 2, (C2) al Imagery (C9)
Wetland Primary □ Surfa ⊠ High ⊠ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa	d Hydrology Indicato Indicators (minimum of ace Water (A1) In Water Table (A2) Irration (A3) Irration (A3) Irration (B1) Irration (B2) Irration (B3) Irration (B3) Irration (B3) Irration (B4) Irration (B4) Irration (B5) Irration (B5) Irration (B6) Irratio	of one req		MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre	d, and 4B) brates (B13) de Odor (C1 ospheres aloreduced Iron eduction in Tressed Plants) ng Living I (C4) illed Soils (D1) (LRI	(C6)	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6)	9) (MLRA 1, 2, (C2) al Imagery (C9))
Wetland Primary □ Surfa □ High □ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa	d Hydrology Indicators (minimum of acce Water (A1) in Water Table (A2) uration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3) al Mat or Crust (B4) Deposits (B5) face Soil Cracks (B6) indation Visible on Aerica	of one req	(B7)	Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Ro Recent Iron Re	d, and 4B) brates (B13) de Odor (C1 ospheres aloreduced Iron eduction in Tressed Plants) ng Living I (C4) illed Soils (D1) (LRI	(C6)	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral	ed Leaves (B tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6)	9) (MLRA 1, 2, (C2) al Imagery (C9))
Wetland Primary □ Surfa ⊠ High □ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa □ Inune □ Spar	d Hydrology Indicators (minimum of Indicators (minimum of Indicators (minimum of Indicators (Minimum of Indicators (Ma)) In Water Table (A2) In Water Table (A2) In Water Table (B4) In Marks (B1) In Deposits (B3) In Mat or Crust (B4) In Deposits (B5) In Mat or Crust (B4) In Deposits (B5) In Mat or Crust (B6) In Matter Table (B6) In Matter Crust (B6) In Matter	of one req	(B7)	MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre	d, and 4B) brates (B13) de Odor (C1 ospheres aloreduced Iron eduction in Tressed Plants) ng Living I (C4) illed Soils (D1) (LRI	(C6)	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6)	9) (MLRA 1, 2, (C2) al Imagery (C9))
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Wetland Primary ☐ Surfa ☐ High ☐ Satu ☐ Wate ☐ Sedi ☐ Drift ☐ Alga ☐ Iron ☐ Surfa ☐ Spar Field Ol	d Hydrology Indicator Indicators (minimum of ace Water (A1) in Water Table (A2) uration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3) al Mat or Crust (B4) Deposits (B5) face Soil Cracks (B6) indation Visible on Aericansely Vegetated Concabservations:	of one req al Imagery ave Surfac Yes □	(B7) = ce (B8)	Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain	de And 4B) abrates (B13) de Odor (C1) aspheres aloreduced Iron aduction in Tracessed Plants in Remarks)) ng Living I (C4) illed Soils (D1) (LRI	(C6)	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6)	9) (MLRA 1, 2, (C2) al Imagery (C9))
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Wetland Primary □ Surfa □ High □ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa □ Inune □ Spar Field OI Surface Water Too	d Hydrology Indicators (minimum of Indicators (minimum of Indicators (minimum of Indicators (Minimum of Indicators (Mater Table (A2) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (B4) Indicator (B4) Indicator (B4) Indicator (B5) Indicator (B6) Indicato	al Imagery ave Surfac Yes □ Yes ⊠ Yes ⊠	(B7)	Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inches) Depth (inches)	de And 4B) aborates (B13) de Odor (C1) aspheres aloreduced Iron eduction in Tressed Plants in Remarks) aborates (B13)) ng Living I (C4) illed Soils (D1) (LRI	(C6) R A) Vetland Hyd	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6) Hummocks ((C2) al Imagery (C9) (LRR A) (D7)
Wetland Primary □ Surfa □ High □ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa □ Inune □ Spar Field OI Surface Water Too	d Hydrology Indicator Indicators (minimum of ace Water (A1) in Water Table (A2) uration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3) al Mat or Crust (B4) Deposits (B5) face Soil Cracks (B6) indation Visible on Aericansely Vegetated Concast Vegetated Concast Water Present? Table Present? Table Present? Table Present? Table State (Minimum of Aricans (Min	al Imagery ave Surfac Yes □ Yes ⊠ Yes ⊠	(B7)	Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inches) Depth (inches)	de And 4B) aborates (B13) de Odor (C1) aspheres aloreduced Iron eduction in Tressed Plants in Remarks) aborates (B13)) ng Living I (C4) illed Soils (D1) (LRI	(C6) R A) Vetland Hyd	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6) Hummocks ((C2) al Imagery (C9) (LRR A) (D7)
Wetland Primary □ Surfa □ High □ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa □ Inund □ Spar Field OI Surface Water To Saturatio (includes) Describe	d Hydrology Indicators Indicators (minimum of ace Water (A1) in Water Table (A2) uration (A3) er Marks (B1) iment Deposits (B2) in Deposits (B3) al Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6) indation Visible on Aeria reely Vegetated Concast baservations: Water Present? Table Present?	al Imagery ave Surfac Yes □ Yes ⊠ Yes ⊠	(B7)	Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inches) Depth (inches)	de And 4B) aborates (B13) de Odor (C1) aspheres aloreduced Iron eduction in Tressed Plants in Remarks) aborates (B13)) ng Living I (C4) illed Soils (D1) (LRI	(C6) R A) Vetland Hyd	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6) Hummocks ((C2) al Imagery (C9) (LRR A) (D7)
Wetland Primary □ Surfa □ High □ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa □ Inune □ Spar Field OI Surface Water Too	d Hydrology Indicators Indicators (minimum of ace Water (A1) in Water Table (A2) uration (A3) er Marks (B1) iment Deposits (B2) in Deposits (B3) al Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6) indation Visible on Aeria reely Vegetated Concast baservations: Water Present? Table Present?	al Imagery ave Surfac Yes □ Yes ⊠ Yes ⊠	(B7)	Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inches) Depth (inches)	de And 4B) aborates (B13) de Odor (C1) aspheres aloreduced Iron eduction in Tressed Plants in Remarks) aborates (B13)) ng Living I (C4) illed Soils (D1) (LRI	(C6) R A) Vetland Hyd	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6) Hummocks ((C2) al Imagery (C9) (LRR A) (D7)
Wetland Primary □ Surfa □ High □ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa □ Inund □ Spar Field OI Surface Water To Saturatio (includes) Describe	d Hydrology Indicators Indicators (minimum of ace Water (A1) in Water Table (A2) uration (A3) er Marks (B1) iment Deposits (B2) in Deposits (B3) al Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6) indation Visible on Aeria reely Vegetated Concast baservations: Water Present? Table Present?	al Imagery ave Surfac Yes □ Yes ⊠ Yes ⊠	(B7)	Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inches) Depth (inches)	de And 4B) aborates (B13) de Odor (C1) aspheres aloreduced Iron eduction in Tressed Plants in Remarks) aborates (B13)) ng Living I (C4) illed Soils (D1) (LRI	(C6) R A) Vetland Hyd	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6) Hummocks ((C2) al Imagery (C9) (LRR A) (D7)
Wetland Primary □ Surfa □ High □ Satu □ Wate □ Sedi □ Drift □ Alga □ Iron □ Surfa □ Inund □ Spar Field OI Surface Water To Saturatio (includes) Describe	d Hydrology Indicators Indicators (minimum of ace Water (A1) in Water Table (A2) uration (A3) er Marks (B1) iment Deposits (B2) in Deposits (B3) al Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6) indation Visible on Aeria reely Vegetated Concast baservations: Water Present? Table Present?	al Imagery ave Surfac Yes □ Yes ⊠ Yes ⊠	(B7)	Water-Stained MLRA 1, 2, 4A Salt Crust (B1' Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inches) Depth (inches)	de And 4B) aborates (B13) de Odor (C1) aspheres aloreduced Iron eduction in Tressed Plants in Remarks) aborates (B13)) ng Living I (C4) illed Soils (D1) (LRI	(C6) R A) Vetland Hyd	Water-Staine 4A, and 4B) Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tterns (B10) Water Table isible on Aeri Position (D2) itard (D3) Test (D5) Mounds (D6) Hummocks ((C2) al Imagery (C9) (LRR A) (D7)

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade	(City/County	y: <u>Bellevue/</u> ł	King	Sampling Date: <u>2/27/18</u>				
Applicant/Owner: King County Wastewa	ater Treatment [Division			State: WA	Samp	_ Sampling Point: WA/1SP2		
Investigator(s): Forrest Parsons, PWS/S	Suzanne Ball		Section, Township, Range: S21 T24N R5E						
Landform (hillslope, terrace, etc.): Ravin	ne	I	Local relief	f (concave, c	nvex	Slope (%): <u>10</u>			
Subregion (LRR): A		Lat: <u>47°3</u>	3'15.13"N		_ Long: <u>122° 9'58</u>	3.25"W	Datum: WGS84	,	
Soil Map Unit Name: Alderwood and Kit	sap soils, very	steep			NWI	classification: <u>N</u>	lone		
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes ⊠	No □	(If no, explain	in Remarks.)			
Are Vegetation ☐, Soil ☐, or Hydrology	y 🗌 significantl	y disturbed?	Α	re "Normal (Circumstances" pr	esent? Ye	es 🛛 No 🗌		
Are Vegetation ☐, Soil ☐, or Hydrology	y 🗌 naturally p	roblematic?	(It	f needed, ex	plain any answers	s in Remarks.)			
SUMMARY OF FINDINGS – Att	ach site ma	p showing	samplin	ig point l	ocations, tran	sects, impo	ortant features, e	tc.	
Lhydrophytic Vegetation Brocont?	Van 🗆	No M							
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes □ Yes □	No ⊠ No ⊠	Is	the Sample	ed Area				
Wetland Hydrology Present?	Yes 🗌	No ⊠	w	ithin a Wetl	and? Y	'es ☐ No	lacktriangle		
Remarks:		140 🖂							
Study Area 3									
Study / Hou o									
VEGETATION - Use scientific	names of p	lants.							
T 0 (D		Absolute			Dominance Tes	t worksheet:			
Tree Stratum (Plot size: 30') 1			Species?	? Status	Number of Domi		<u>1</u> (A)		
2					Total Number of	Dominant			
3					Species Across	All Strata:	<u>2</u> (B)		
4		<u>0</u>	= Total Co	over	Percent of Domin That Are OBL, F.		<u>50</u> (A/B)		
Sapling/Shrub Stratum (Plot size: 15')					Prevalence Inde	ex worksheet:			
1. Rubus armeniacus		<u>50</u>	<u>Y</u>	<u>FAC</u>	Total % Co	ver of:	Multiply by:	_	
2					OBL species		x 1 =	_	
3					FACW species		x 2 =	_	
4					FAC species	50	x 3 = <u>150</u>	_	
5		<u>50</u>	= Total Co		FACU species	40	x 4 = <u>160</u>	_	
Herb Stratum (Plot size: 5')		<u>50</u>	= 10tai 0t	OVCI	UPL species		x 5 =	_	
Geranium robertianum		40	<u>Y</u>	FACU	Column Totals: 9	90	(A) <u>310</u>	_ (B)	
2.					Provolonce	Index = B/A =	2.4		
3					Frevalence	HIGEX = B/A =	3.4	_	
4					Hydrophytic Ve	getation Indica	ators:		
5					l	st for Hydrophy	-		
6. 7.						ce Test is >50% nce Index is ≤3.0			
8							ons1 (Provide supporti	ina	
9.							separate sheet)	9	
10.						Non-Vascular I			
11							egetation ¹ (Explain)		
		<u>40</u>	= Total Co	over	¹ Indicators of hyd present, unless of		tland hydrology must	be	
Woody Vine Stratum (Plot size: 15')					present, unless (morannea or bio	DIGITIALIC.		
,									
1					Hydrophytic Vegetation				
		<u>0</u>	= Total Co	over	Present?	Yes □	No ⊠		
% Bare ground in Herb Stratum <u>60</u>									
		_			1				

SOIL Sampling Point WA/1SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix			R	edox Fea	tures			
Depth	Color (moist)								
(inches)		<u>%</u>	Cole	or (moist)	%	Type ¹	Loc ²	Texture	Remarks
<u>0-5</u>	10YR 2/1	<u>100</u>						silty loam	
<u>5-12</u>	10YR 4/2	<u>100</u>						silty loam	
								-	
								-	
	-								
									<u> </u>
									-
	oncentration, D=Dep						d Sand (² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Application	able to all	LRRs,	unless other	rwise not	ed.)		Indio	cators for Problematic Hydric Soils ³ :
Histoso				andy Redox					2 cm Muck (A10)
	Epipedon (A2)			stripped Matri	` '				Red Parent Material (TF2)
	Histic (A3)			oamy Mucky			t MLRA		Very Shallow Dark Surface (TF12)
-	gen Sulfide (A4)	(0.44)		oamy Gleyed	•	-2)			Other (Explain in Remarks)
	ed Below Dark Surface	ce (A11)		epleted Matr		2)		31	antona of hundrankudia unanatatian and
	Dark Surface (A12)		_	Redox Dark S	`	,			cators of hydrophytic vegetation and
-	Mucky Mineral (S1) Gleyed Matrix (S4)			epleted Dark Redox Depres					tland hydrology must be present, ess disturbed or problematic.
	Layer (if present):		<u>''</u>	redox Depres	5310113 (1 0	')		u u u	ess disturbed of problematic.
T									
	`							Usalvia (Soil Brosont? Voc 🗆 No 🕅
	es):							nyaric (Soil Present? Yes ☐ No ☒
Remarks:									
HYDROLO	2CV								
	Hydrology Indicator								
Primary Ir	ndicators (minimum o	f one requ	ired; ch	eck all that a	oply)				Secondary Indicators (2 or more required)
☐ Surfac	ce Water (A1)			☐ Water-S	tained Le	aves (B9) (except		☐ Water-Stained Leaves (B9) (MLRA 1, 2,
☐ High V	Vater Table (A2)			MLRA 1	, 2, 4A, a	nd 4B)			4A, and 4B)
☐ Satura	ation (A3)			☐ Salt Cru	st (B11)				☐ Drainage Patterns (B10)
☐ Water	Marks (B1)			☐ Aquatic	Invertebra	ates (B13)			☐ Dry-Season Water Table (C2)
☐ Sedim	ent Deposits (B2)			☐ Hydroge	en Sulfide	Odor (C1)			☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift D	eposits (B3)			☐ Oxidized	d Rhizosp	heres along	g Living	Roots (C3)	☐ Geomorphic Position (D2)
☐ Algal I	Mat or Crust (B4)			Presenc	e of Redu	uced Iron (C	24)		☐ Shallow Aquitard (D3)
☐ Iron D	eposits (B5)			Recent	Iron Redu	ction in Till	ed Soils	(C6)	☐ FAC-Neutral Test (D5)
	ce Soil Cracks (B6)			☐ Stunted					Raised Ant Mounds (D6) (LRR A)
	ation Visible on Aeria	I Imagery	(B7)	☐ Other (E			, ,	,	☐ Frost-Heave Hummocks (D7)
	ely Vegetated Conca		. ,	_ `	•	,			_
	servations:		,						
	Vater Present?	Yes 🗌	No ∑	7 Denth (i	nches).				
	ble Present?	Yes 🗆	No ∑						
	n Present?							National Usal	rology Present? Yes ☐ No ☒
	capillary fringe)	Yes 🗌	No ∑	7 Debtu (i	ncnes): _		— I '	vetiana Hya	rology Present? Yes ☐ No ⊠
	Recorded Data (stream	am gauge,	monito	ring well, aeri	al photos	, previous i	nspectio	ns), if availat	ole:
Remarks:									

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade	City/Count	y: <u>Bellevue/</u> ł	King	Samplir	Sampling Date: 2/27/18					
Applicant/Owner: King County Wastewa	ater Treatment [Division	State: WA Sampling Point: WB							
Investigator(s): Forrest Parsons, PWS/5	Suzanne Ball		Section, Township, Range: S21 T24N R5E							
Landform (hillslope, terrace, etc.): Ravir	ne	I	_ocal relief	f (concave, c	convex, none): <u>Co</u>	ncave	Slope (%):2	-3		
Subregion (LRR): A		Lat: <u>47°</u> ;	33'12.81"N	l	_ Long: <u>122° 9'58</u>	3.05"W	Datum: WGS	84		
Soil Map Unit Name: Alderwood and Kit	tsap soils, very	steep			NWI	classification: No	ne			
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes ⊠	No □	(If no, explain	in Remarks.)				
Are Vegetation ☐, Soil ☐, or Hydrolog	y 🗌 significantl	y disturbed?	Α	re "Normal C	Circumstances" pr	esent? Yes	No □			
Are Vegetation □, Soil □, or Hydrolog	y ☐ naturally p	roblematic?	(1	f needed, ex	plain any answers	s in Remarks.)				
SUMMARY OF FINDINGS – Att	tach site ma	p showing	samplin	ig point lo	ocations, tran	sects, impor	tant features,	, etc.		
Hydrophytic Vegetation Present?	Yes ⊠	No 🗆	Is	the Sample	ed Area					
Hydric Soil Present?	Yes ⊠	No 🗌	w	ithin a Wetl	and? Y	′es 🛛 No [
Wetland Hydrology Present?	Yes 🛚	No 🗌								
Remarks:										
Study Area 3										
\		•								
VEGETATION – Use scientific	names of p	lants.			1					
Tree Ctreture (Diet sine, 201)		Absolute		t Indicator	Dominance Tes	t worksheet:				
Tree Stratum (Plot size: 30')		% Cover			Number of Domi	•				
Alnus rubra Populus balsamifera			<u>Y</u> <u>Y</u>	<u>FAC</u>	That Are OBL, F.	ACW, or FAC:	<u>4</u> (A)			
3			<u>T</u>	<u>FAC</u>	Total Number of					
4.					Species Across	All Strata:	<u>4</u> (B)			
		100	= Total C	over	Percent of Domi		400 (A /D)			
Continue (Charles Charles (Diet sine 45))					That Are OBL, F		<u>100</u> (A/B)			
Sapling/Shrub Stratum (Plot size: 15')		00	V	F40	Prevalence Inde		Maritim Irania			
1. Rubus spectabilis			<u>Y</u>	<u>FAC</u>		over of:				
2					· ·		x 1 =			
4					*		x 2 =			
5.							x 3 =			
		<u>60</u>	= Total C	over	-		x 4 =			
Herb Stratum (Plot size: 5')							x 5 =			
Tolmeia menziesii		<u>25</u>	<u>Y</u>	<u>FAC</u>	Column Totals:	(A)	(B)		
2					Prevalence	e Index = B/A =				
3										
4 5.						getation Indicate				
5 6						est for Hydrophytic ce Test is >50%	c Vegetation			
7.						ce rest is >50% nce Index is ≤3.0¹				
8.					4 - Morphol	ogical Adaptation	s1 (Provide suppo	orting		
9.					data in R	emarks or on a se	eparate sheet)	ŭ		
10					_	Non-Vascular Pl				
11							getation1 (Explain)			
		<u>25</u>	= Total C	over		dric soil and wetla disturbed or probl	and hydrology mu: ematic	st be		
Woody Vine Stratum (Plot size: 15')					F100011, 0111003 (
					Lively on by 41 -					
1					Hydrophytic Vegetation					
				Present?	Yes ⊠	No □				
		<u>0</u>	= Total C	over	rieseiit?	163 🖂	140			
% Bare ground in Herb Stratum <u>75</u>		<u>0</u>	= Total Co	over	Fresent?	163 🖂	140 🗀			

SOIL Sampling Point WBSP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix			R	edox Fea	tures					
Depth	Color (moist)										
(inches)		%		or (moist)	%	Type ¹	Loc ²	Texture	<u> </u>	Remarks	3
<u>0-14</u>	10YR 2/2	<u>95</u>	7.5YR 5	/6	<u>5</u>	<u>C</u>	<u>M</u>	silty loam			
											_
	-							-			
			-								
								-			
	oncentration, D=Dep						d Sand (PL=Pore Linir	
Hydric Soil	Indicators: (Application	able to a	II LRRs,	unless other	rwise not	ed.)		Ind	icators for Prob	lematic Hydric	: Soils ³ :
Histoso				andy Redox					2 cm Muck (A1		
	Epipedon (A2)			tripped Matri	` '				Red Parent Ma		
	Histic (A3)			oamy Mucky			t MLRA	_	Very Shallow D		F12)
	gen Sulfide (A4)	(0.4.4)		oamy Gleyed	•	-2)			Other (Explain	in Remarks)	
	ed Below Dark Surfac	e (A11)		epleted Matr		5)		31	ligators of burders	hutio vonte!	n and
	Dark Surface (A12) Mucky Mineral (S1)			edox Dark S					licators of hydrop etland hydrology		
-	Gleyed Matrix (S4)			epleted Dark edox Depres					etiand nydrology iless disturbed oi		и,
	Layer (if present):		<u> </u>	edox Depies	5310113 (1 0	')		- ui	iless disturbed of	problematic.	
Type:	`							Llydria	Cail Dracant?	Vac M	No 🗆
	es):							пуапс	Soil Present?	Yes ⊠	No 🗌
Remarks:											
HYDROLO	2CV										
	Hydrology Indicator										
Primary Ir	ndicators (minimum o	f one req	uired; ch	eck all that a	oply)				Secondary Inc	dicators (2 or m	ore required)
☐ Surfac	ce Water (A1)			☐ Water-S	tained Le	aves (B9)	(except		☐ Water-Sta	ined Leaves (B	9) (MLRA 1, 2,
☐ High V	Vater Table (A2)			MLRA 1	, 2, 4A, a	nd 4B)			4A, and 4	B)	
☐ Satura	ation (A3)			☐ Salt Cru	st (B11)				☐ Drainage I	Patterns (B10)	
☐ Water	Marks (B1)			☐ Aquatic	Invertebra	ates (B13)			☐ Dry-Seaso	on Water Table	(C2)
☐ Sedim	nent Deposits (B2)			☐ Hydroge	en Sulfide	Odor (C1)			Saturation	Visible on Aeri	al Imagery (C9)
☑ Drift D	Peposits (B3)			Oxidized	d Rhizosp	heres alon	g Living	Roots (C3)	□ Geomorph	nic Position (D2)
☐ Algal I	Mat or Crust (B4)			Presenc	e of Redu	uced Iron (0	C4)		☐ Shallow A	quitard (D3)	
☐ Iron D	eposits (B5)			Recent	Iron Redu	ction in Till	led Soils	(C6)	☐ FAC-Neut	ral Test (D5)	
☐ Surfac	ce Soil Cracks (B6)			☐ Stunted	or Stress	ed Plants (D1) (LR	R A)	☐ Raised An	t Mounds (D6)	(LRR A)
☐ Inunda	ation Visible on Aeria	I Imagery	(B7)	☐ Other (E					☐ Frost-Hea	ve Hummocks	(D7)
☐ Spars	ely Vegetated Conca	ve Surfac	ce (B8)								
	servations:										
Surface V	Vater Present?	Yes 🗌	No ⊠	Depth (i	nches):						
Water Tal	ble Present?	Yes 🗌	No ⊠								
	n Present?	Yes 🗌	No ⊠					Netland Hy	drology Present	? Yes ⊠	No □
	capillary fringe)	103 🗀	NO E	g Deptii (i	nones)		`	venana my	arology i resem	. 103 🖂	110
Describe	Recorded Data (strea	am gauge	e, monitor	ing well, aeri	al photos	, previous i	nspectio	ns), if availa	ıble:		
Remarks:											
1											

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Applicant/Owner: King County Wastewater Tr		ivision			State: WA	_ Sampling	Point: WBSP2			
Investigator(s): Forrest Parsons PMS/Suzani							Sampling Point: WBSP2			
investigator(s). I onest i alsons, i vvo/suzani	ne Ball	;	Section, Township, Range: S21 T24N R5E							
Landform (hillslope, terrace, etc.): Ravine		<u>[</u>	_ocal reli	ief (concave,	convex, none): Convex		Slope (%): <u>2-</u>	-3		
Subregion (LRR): A		Lat: <u>47°3</u>	3'12.85"	'N	Long: <u>122° 9'57.34"W</u>		Datum: WGS8	84		
Soil Map Unit Name: Alderwood and Kitsap so	oils, very st	teep			NWI classif	cation: Non	е			
Are climatic/hydrologic conditions on the site t	typical for t	his time of yea	ır? Yes	⊠ No □	(If no, explain in Rer	narks.)				
Are Vegetation \square , Soil \square , or Hydrology \square s	ignificantly	disturbed?		Are "Normal	Circumstances" present?	Yes [⊠ No □			
Are Vegetation □, Soil □, or Hydrology □ n	aturally pro	oblematic?		(If needed, e	explain any answers in Re	marks.)				
SUMMARY OF FINDINGS – Attach	site map	showing	sampl	ing point	locations, transects	i, importa	ant features,	etc.		
		🗖								
	′es □	No ⊠		Is the Samp	led Area					
'	′es □ ′aa □	No ⊠		within a We	tland? Yes □	No 🗵]			
	es 🗌	No 🛛								
Remarks:										
Study Area 3										
VEGETATION										
VEGETATION – Use scientific nam	es of pia	ants.			T					
Troc Stratum (Blot aire) 201)		Absolute		ant Indicato		sheet:				
<u>Tree Stratum</u> (Plot size: 30')		% Cover	Specie		Number of Dominant S					
1. Alnus rubra			<u>Y</u>	<u>FAC</u>	That Are OBL, FACW,	or FAC: <u>1</u>	(A)			
2					Total Number of Domin		(-)			
4					Species Across All Stra	ta: <u>3</u>	(B)			
			= Total	Cover	Percent of Dominant Sp		0 (4 (5)			
Conline/Chrush Ctrotum (Dlot oize, 451)					That Are OBL, FACW,		<u>3</u> (A/B)			
Sapling/Shrub Stratum (Plot size: 15')		05	V	FACU	Prevalence Index wor		Multiply by			
1. Rubus ursinus			<u>Y</u>	<u>FACU</u>						
2					OBL species		· ·			
4					FACW species					
5.					*		3 = 120			
		<u>25</u>	= Total Cover		FACU species 85					
Herb Stratum (Plot size: 5')						x				
Polystichum munitum		<u>60</u>	<u>Y</u>	<u>FACU</u>	Column Totals: 125	(A	.) <u>460</u>	(B)		
2					Prevalence Index	= B/A = 3.	7			
3										
4 5.					Hydrophytic Vegetation					
5 6					☐ 1- Rapid Test for F☐ 2- Dominance Tes		Vegetation			
7.				_	☐ 3 - Prevalence Ind					
8.					4 - Morphological	Adaptations ¹	1 (Provide suppo	orting		
9.					data in Remarks	s or on a sep	parate sheet)	Ü		
10					5 - Wetland Non-V					
11					☐ Problematic Hydro	-				
		<u>60</u>	= Total	Cover	¹ Indicators of hydric soi present, unless disturbe			st be		
Woody Vine Stratum (Plot size: 15')					process, armoss disturbe	o. problet				
					Lludua e budia					
1					Hydrophytic Vegetation					
			= Total	Cover		Yes □	s □ No ⊠			
% Bare ground in Herb Stratum 40		_ 								

SOIL Sampling Point <u>WBSP2</u>

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix			R	edox Fea	tures			
Depth	Color (moist)								
(inches)		<u>%</u>	Colo	r (moist)	%	Type ¹	Loc ²	Texture	e Remarks
<u>0-14</u>	10YR 3/2	100						silty loam	
¹ Type: C=C	oncentration, D=Depl	etion RM-	Reduce	d Matrix CS	S=Covere	d or Coated	d Sand (Grains	² Location: PL=Pore Lining, M=Matrix.
	Indicators: (Applica						a Garia (icators for Problematic Hydric Soils ³ :
☐ Histoso				andy Redox		,			2 cm Muck (A10)
	Epipedon (A2)			ripped Matri					Red Parent Material (TF2)
	Histic (A3)			amy Mucky	` '	F1) (eycen	t MI RΔ	_	Very Shallow Dark Surface (TF12)
	gen Sulfide (A4)			amy Gleyed			· WILKA		Other (Explain in Remarks)
-	ed Below Dark Surfac			epleted Matr	•	_)			Other (Explain in Remarks)
	Dark Surface (A12)			edox Dark S		3)		3Ind	dicators of hydrophytic vegetation and
	Mucky Mineral (S1)		_	epleted Dark	`	,			etland hydrology must be present,
	Gleyed Matrix (S4)			edox Depres					nless disturbed or problematic.
	Layer (if present):		<u> </u>	Jack Bopies	0 1) 011010	,			need dictarbed of problematic.
_									
Depth (inche	es):							Hydric	Soil Present? Yes ☐ No ⊠
Remarks:									
HYDROLO	OGY								
Wetland	Hydrology Indicator	s:							
	ndicators (minimum o		rod: cho	ck all that a	anly)				Secondary Indicators (2 or more required)
	·	i one requii				(DO) (·		
_	ce Water (A1)			☐ Water-S			except		Water-Stained Leaves (B9) (MLRA 1, 2,
_	Water Table (A2)				, 2, 4A, a	nd 4B)			4A, and 4B)
☐ Satura				☐ Salt Cru					☐ Drainage Patterns (B10)
	Marks (B1)			Aquatic	Invertebra	ates (B13)			☐ Dry-Season Water Table (C2)
☐ Sedim	nent Deposits (B2)			☐ Hydroge	n Sulfide	Odor (C1)			☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift D	Deposits (B3)			Oxidized	d Rhizosp	heres along	g Living	Roots (C3)	☐ Geomorphic Position (D2)
☐ Algal I	Mat or Crust (B4)			☐ Presence	e of Redu	ced Iron (C	C4)		☐ Shallow Aquitard (D3)
☐ Iron D	eposits (B5)			☐ Recent I	ron Redu	ction in Till	ed Soils	(C6)	☐ FAC-Neutral Test (D5)
	ce Soil Cracks (B6)			☐ Stunted					Raised Ant Mounds (D6) (LRR A)
	ation Visible on Aeria	l Imagery (F		Other (E			/ (,	Frost-Heave Hummocks (D7)
	ely Vegetated Conca	• • •							
	servations:	ve Gunace	(50)						
			🖂	5 (1					
	Vater Present?	Yes 🗌	No ⊠						
Water Tal	ble Present?	Yes 🗌	No 🛚	Depth (i	nches): _				
	n Present?	Yes 🗌	No 🛚	Depth (i	nches): _		\	Netland Hyd	drology Present? Yes ☐ No ⊠
	capillary fringe)								
Describe	Recorded Data (stream	am gauge, r	monitori	ng well, aeri	al photos	, previous i	nspectio	ons), if availa	able:
Remarks:									

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade)	(City/Coun	ity: <u>Bellevue/l</u>	King	Sampli	ng Date: <u>2/28/18</u>	
Applicant/Owner: King County Wastewa	Division			State: WA	Samplii	ng Point: WGSP1		
Investigator(s): Forrest Parsons, PWS/S	Suzanne Ball	;	Section, 1	Γownship, Ra	inge: <u>S21 T24N R</u>	5E		
Landform (hillslope, terrace, etc.): Ravir	ne	l	_ocal relie	ef (concave, o	convex, none): <u>Co</u>	ncave	Slope (%):0)
Subregion (LRR): A		Lat: <u>47°3</u>	3'9.87"N		_ Long: <u>122° 9'5</u> 4	1.40"W	Datum: WGS	884
Soil Map Unit Name: Alderwood and Kit	sap soils, very	steep			NWI	classification: No	one	
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes 🛭	⊠ No □	(If no, explain	in Remarks.)		
Are Vegetation ☐, Soil ☐, or Hydrolog	y 🗌 significantl	y disturbed?	A	Are "Normal (Circumstances" pr	esent? Yes	s 🛛 No 🗌	
Are Vegetation ☐, Soil ☐, or Hydrology	y □ naturally p	roblematic?	((If needed, ex	plain any answer	s in Remarks.)		
SUMMARY OF FINDINGS – Att	tach site ma	p showing	sampli	ng point le	ocations, tran	sects, impor	tant features	, etc.
	🗖							
Hydrophytic Vegetation Present?	Yes ⊠	No 🗆	l:	s the Sample	ed Area			
Hydric Soil Present?	Yes ⊠	No 🗌	v	vithin a Wetl	and?	'es ⊠ No		
Wetland Hydrology Present?	Yes 🛚	No 🗌						
Remarks:	00							
Study Area 3. Closed depressional Page 1	55							
	_							
VEGETATION – Use scientific	names of p	lants.						
T 0: (D) : 000		Absolute		nt Indicator	Dominance Tes	t worksheet:		
<u>Tree Stratum</u> (Plot size: 30')		% Cover	Species	s? Status	Number of Domi			
1			-		That Are OBL, F	ACW, or FAC:	<u>1</u> (A)	
2			-		Total Number of			
4.			-	-	Species Across	All Strata:	<u>1</u> (B)	
		<u>0</u>	= Total C	Cover	Percent of Domi		(00 (4 /5)	
lo 1: 401 1 01 4 (D) 4 5 (D)		_			That Are OBL, F		<u>100</u> (A/B)	
Sapling/Shrub Stratum (Plot size: 15')			.,		Prevalence Inde			
Rubus spectabilis			<u>Y</u>	<u>FAC</u>		over of:		
2							x 1 =	
3 4			-	-	-		x 2 =	
5.				·			x 3 =	
		<u>25</u>	= Total C	Cover			x 4 =	
Herb Stratum (Plot size: 5')							x 5 =	
1					Column Totals:		(A)	(B)
2		<u> </u>			Prevalence	e Index = B/A =		
3								_
4				· —	Hydrophytic Ve	_		
5						est for Hydrophyti	c Vegetation	
6 7						ce Test is >50% nce Index is ≤3.0	1	
8.			-		—		ns¹ (Provide suppo	ortina
9.					data in R	emarks or on a s	eparate sheet)	Ü
10					1—	Non-Vascular P		
11			-				getation ¹ (Explain)	
		<u>0</u>	= Total C	Cover	¹ Indicators of hypresent, unless		and hydrology mu Ismatic	ıst be
Woody Vine Stratum (Plat size: 45")					prosont, uniess t	disturbed of prob	iorriano.	
Woody Vine Stratum (Plot size: 15')					Handa I d			
1			-	· —	Hydrophytic Vegetation			
/				<u> </u>	- 3			
2			= Total C	Cover	Present?	Yes 🖂	No □	
% Bare ground in Herb Stratum <u>100</u>		<u>0</u>	= Total C	Cover	Present?	Yes ⊠	No ∐	

SOIL Sampling Point WGSP1

Profile De	scription: (Describe	to the de	pth needed	to docun	nent the	indicator	or confi	rm the	absen	ce of indicato	rs.)			
	Matrix			R	edox Fea	tures		_						
Depth	Color (moist)													
(inches)		%	Color (moist)	%	Type ¹	Loc ²		<u>Fexture</u>		Ren	<u>narks</u>		
<u>0-4</u>	10YR 2/2	<u>100</u>						loar	<u>n</u>	_				
<u>4-14</u>	10YR 4/2	<u>85</u>	10YR 5/8		<u>15</u>	<u>C</u>	<u>M</u>	silty	loam					
										_				
										_				
										_				
¹Type: C=0	Concentration, D=Dep	letion, RN	M=Reduced	Matrix, CS	S=Covere	d or Coate	ed Sand (Grains	S.	² Location	: PL=Pore	Lining	g, M=Matri	х.
	il Indicators: (Applic									ators for Prol				
☐ Histos	sol (A1)		☐ San	dy Redox	(S5)					2 cm Muck (A	10)			
☐ Histic	Epipedon (A2)			ped Matri						Red Parent Ma	aterial (TF2	:)		
☐ Black	Histic (A3)		Loar	ny Mucky	Mineral (F1) (exce	pt MLRA	\ 1)		Very Shallow I	Dark Surfac	e (TF	12)	
-	gen Sulfide (A4)		☐ Loar	my Gleyed	l Matrix (F	- 2)				Other (Explain	in Remark	s)		
l ·	ted Below Dark Surface	ce (A11)		leted Matr										
	Dark Surface (A12)			ox Dark S		•				cators of hydro				
-	/ Mucky Mineral (S1)			leted Dark						land hydrology			,	
	Gleyed Matrix (S4)		☐ Red	ox Depres	Sions (F8	3)			unie	ess disturbed o	r problema	tic.		
_	e Layer (if present):													
	l V.								Judria (Soil Brocont?	Voc N	7	No 🗆	
	hes):			_					iyunc c	Soil Present?	Yes ⊵	7	No 🗌	
Remarks:														
HYDROL	.OGY													
Wetland	Hydrology Indicator	rs:												
Primary	Indicators (minimum o	of one req	uired; check	all that ap	oply)					Secondary In	dicators (2	or mo	re required	<u>(</u> t
☐ Surfa	ace Water (A1)	•		l Water-S	tained Le	aves (B9)	(except			☐ Water-Sta	ained Leave	es (B9) (MLRA 1	. 2.
	Water Table (A2)				, 2, 4A, a		(53355)			4A, and 4		(, (, –,
_	ration (A3)			Salt Cru						☐ Drainage	-	310)		
_	er Marks (B1)			-	` ,	ates (B13)				☐ Dry-Seas			C2)	
	ment Deposits (B2)			•		Odor (C1				☐ Saturation				(C9)
	Deposits (B3)					heres alor		Roots	s (C3)	□ Geomorp				(/
	Mat or Crust (B4)					uced Iron (-		()		quitard (D3			
	Deposits (B5)		_	_		ction in Ti	,	s (C6)		☐ FAC-Neu				
	ace Soil Cracks (B6)			_		ed Plants					nt Mounds		LRR A)	
_	dation Visible on Aeria	ıl Imagery				Remarks)	` ' `	,			ve Hummo	. , ,	•	
	sely Vegetated Conca		. ,	,		,							,	
	oservations:		(-)											
	Water Present?	Yes □	No ⊠	Denth (ii	nches):									
	able Present?	Yes ⊠	No 🗆		nches): <u>1</u>		•							
	on Present?	Yes ⊠	No 🗆			0		Motla	nd ∐vdı	ology Presen	+2 Va	s 🛛	No □	
	s capillary fringe)	162	INO 🗀	Deptii (ii	iciies). <u>o</u>		'	vvetiai	nu nyui	Ology Fresen	i: 16:	5 🖂	NO 🗀	
	Recorded Data (stre	am gauge	e, monitoring	well, aeri	al photos	, previous	inspection	ons), if	availab	le:				
Remarks	S:													

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade	!		City/Cour	nty: <u>Bellevue/l</u>	King	Samp	oling Dat	e: <u>2/28/18</u>	
Applicant/Owner: King County Wastewa	Division	State: <u>WA</u> Sampling Point: <u>W</u> Section, Township, Range: <u>S21 T24N R5E</u>							
Investigator(s): Forrest Parsons, PWS/S	Suzanne Ball		Section,	Township, Ra	ange: <u>S21 T24N R</u>	:5E			
Landform (hillslope, terrace, etc.): Ravin	ne	I	Local reli	ef (concave, o	convex, none): <u>No</u>	ne		Slope (%): <u>0</u>	
Subregion (LRR): A		Lat: <u>47°</u> ;	<u> 1"88.9'88</u>	N	_ Long: <u>122° 9'5</u> 4	4.63"W	Da	atum: WGS8	4
Soil Map Unit Name: Alderwood and Kit	sap soils, very	steep			NWI	classification: 1	None		
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes	⊠ No □	(If no, explair	n in Remarks.)			
Are Vegetation □, Soil □, or Hydrology	y 🗌 significantl	y disturbed?		Are "Normal (Circumstances" pr	resent? Y	es 🛛	No 🗌	
Are Vegetation □, Soil □, or Hydrology	y 🔲 naturally p	roblematic?		(If needed, ex	plain any answer	s in Remarks.)			
SUMMARY OF FINDINGS – Att	ach site ma	p showing	sampli	ing point l	ocations, tran	sects, impo	ortant	features,	etc.
		🖂							
Hydrophytic Vegetation Present?	Yes 🗌	No ⊠		Is the Sample	ed Area				
Hydric Soil Present?	Yes 🗌	No ⊠	,	within a Wetl	land?	∕es 🗌 No	S		
Wetland Hydrology Present?	Yes 🗌	No 🛛							
Remarks:									
Study Area 3									
VEGETATION – Use scientific	names of p	lants.							
		Absolute		ant Indicator	Dominance Tes	st worksheet:			
<u>Tree Stratum</u> (Plot size: 30')		% Cover			Number of Domi				
1. Alnus rubra			<u>Y</u>	<u>FAC</u>	That Are OBL, F	ACW, or FAC:	<u>1</u> (A)		
2					Total Number of	Dominant			
3 4					Species Across	All Strata:	<u>3</u> (B)		
4.		100	= Total	Cover	Percent of Domi				
		100	- Total	00101	That Are OBL, F		<u>33</u> (A/	B)	
Sapling/Shrub Stratum (Plot size: 15')					Prevalence Ind				
1. Rubus ursinus			<u>Y</u>	<u>FACU</u>	Total % Co	over of:	M	ultiply by:	_
2					OBL species		_ x 1 =		_
3					FACW species				_
4 5.						100			_
<u> </u>		<u>15</u>	= Total	Cover	FACU species			380	_
Herb Stratum (Plot size: 5')		<u>—</u>			UPL species				_
1.					Column Totals:	195	_ (A)	680	(B)
2.					Prevalence	e Index = B/A =	. 35		
3					1 Tevalence	macx = b/A =	. 0.0		
4					Hydrophytic Ve	getation Indic	ators:		
5					I	est for Hydrophy	_	etation	
6					I —	ice Test is >50%			
7						nce Index is ≤3. ogical Adaptati	-	ovido suppor	tina
8 9					data in R	emarks or on a	separat	e sheet)	ung
10.					_	Non-Vascular			
11.					☐ Problemation	Hydrophytic V	egetatio	n¹ (Explain)	
		<u>0</u>	= Total	Cover	¹ Indicators of hy				t be
					present, unless	disturbed or pro	blemation	D	
Woody Vine Stratum (Plot size: 15')									
		80	<u>Y</u>	<u>FACU</u>	Hydrophytic				
1. <u>Hedera helix</u>									
Hedera helix 2.			T-1-1		Vegetation Present?	Yes □		No ⊠	
		<u>80</u>	= Total	Cover	Present?	Yes □		No ⊠	

SOIL Sampling Point <u>WGSP2</u>

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix			R	edox Fea	tures			
– • • • • • • • • • • • • • • • • • • •	Color (moist)								
(inches)		%	Colo	or (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
<u>0-14</u>	10YR 3/2	<u>100</u>						sandy loam	with gravel
								-	- -
								-	-
¹Type: C=Co	oncentration, D=Dep	letion RM:	-Reduce	ed Matrix CS	S=Covere	d or Coated	d Sand (Grains	² Location: PL=Pore Lining, M=Matrix.
	Indicators: (Applic						a Garia C		cators for Problematic Hydric Soils ³ :
☐ Histoso				andy Redox		,			2 cm Muck (A10)
	Epipedon (A2)			tripped Matri					Red Parent Material (TF2)
	Histic (A3)			oamy Mucky	` '	E1) (avcan	+ MI PA	_	Very Shallow Dark Surface (TF12)
	gen Sulfide (A4)			pamy Gleyed			LIVILINA	''	Other (Explain in Remarks)
	ed Below Dark Surfa	co (Δ11)		epleted Matr	•	2)			Other (Explain in Nemarks)
	Dark Surface (A12)	<i>(A11)</i>		edox Dark S		3)		³ Indi	cators of hydrophytic vegetation and
	Mucky Mineral (S1)		_	edox Dark S epleted Dark	`	,			land hydrology must be present,
-	Gleyed Matrix (S4)			edox Depres					ess disturbed or problematic.
	Layer (if present):			cdox Depice	310113 (1 0	,		- Citil	cos disturbed of problematic.
_									
Depth (inche	es):							Hydric	Soil Present? Yes ☐ No ⊠
Remarks:									
HYDROLO	OGY								
Wetland I	Hydrology Indicator	rs:							
	ndicators (minimum o								
		of one real	irad: che	ack all that a	anly)				Secondary Indicators (2 or more required)
	•	of one requ	ired; che			(20)	·		Secondary Indicators (2 or more required)
I —	ce Water (A1)	of one requ	ired; che	☐ Water-S	tained Le	, ,	except		☐ Water-Stained Leaves (B9) (MLRA 1, 2,
☐ High V	ce Water (A1) Water Table (A2)	of one requ	ired; che	☐ Water-S	tained Le	, ,	except		☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
I —	ce Water (A1) Water Table (A2)	of one requ	ired; che	☐ Water-S	tained Le	, ,	except		☐ Water-Stained Leaves (B9) (MLRA 1, 2,
☐ High V	ce Water (A1) Water Table (A2)	one requ	ired; che	☐ Water-S	tained Le , 2, 4A, a st (B11)	nd 4B)	except		☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
High V Satura Water	ce Water (A1) Vater Table (A2) ation (A3)	one requ	ired; che	☐ Water-S MLRA 1 ☐ Salt Cru	itained Le , 2, 4A, a st (B11) Invertebra	nd 4B) ates (B13)	except		 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10)
High V Satura Water Sedim	ce Water (A1) Water Table (A2) ation (A3) Marks (B1)	one requ	ired; che	☐ Water-S MLRA 1 ☐ Salt Cru ☐ Aquatic	tained Le , 2, 4A, a st (B11) Invertebra en Sulfide	nd 4B) ates (B13) Odor (C1)	•	Roots (C3)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2)
High V Satura Water Sedim Drift D	ve Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3)	one requ	ired; che	Water-S MLRA 1 Salt Cru Aquatic Hydroge Oxidized	stained Le , 2, 4A, a st (B11) Invertebra en Sulfide d Rhizosp	nd 4B) ates (B13) Odor (C1) heres along	g Living	Roots (C3)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2)
High V Satura Water Sedim Drift D	ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4)	one requ	ired; che	Water-S MLRA 1 Salt Cru Aquatic Hydroge Oxidized Presend	tained Le , 2, 4A, a st (B11) Invertebra en Sulfide d Rhizosp ee of Redu	nd 4B) ates (B13) Odor (C1) heres alongued Iron (C	g Living C4)	, ,	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3)
High V Satura Water Sedim Drift D Algal I	ce Water (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) heposits (B5)	one requ	ired; che	Water-S MLRA 1 Salt Cru Aquatic Hydroge Oxidized Presend Recent	stained Le , 2, 4A, a st (B11) Invertebra en Sulfide d Rhizosp ee of Redu Iron Redu	nd 4B) ates (B13) Odor (C1) heres alongued Iron (C) ction in Till	g Living C4) ed Soils	(C6)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5)
High V Satura Water Sedim Drift D Algal I Iron D Surface	ce Water (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6)			Water-S MLRA 1 Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted	tained Le , 2, 4A, a st (B11) Invertebra en Sulfide d Rhizosp ee of Redu fron Redu or Stress	ates (B13) Odor (C1) heres alonguced Iron (Cition in Till ed Plants (g Living C4) ed Soils	(C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
High V Satura Water Sedim Drift D Algal I Iron D Surfac	ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) reposits (B5) ce Soil Cracks (B6) ation Visible on Aeria	l Imagery	(B7)	Water-S MLRA 1 Salt Cru Aquatic Hydroge Oxidized Presend Recent	tained Le , 2, 4A, a st (B11) Invertebra en Sulfide d Rhizosp ee of Redu fron Redu or Stress	ates (B13) Odor (C1) heres alonguced Iron (Cition in Till ed Plants (g Living C4) ed Soils	(C6)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5)
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High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda Sparse Field Obs Surface W Water Tat Saturation (includes Describe	ce Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) meposits (B5) meposits (B5) meter Soil Cracks (B6) ation Visible on Aeria mely Vegetated Concast meter Present? The Present? meter Prese	I Imagery (ve Surface Yes	(B7) e (B8) No ⊠ No ⊠ No ⊠	Water-S MLRA 1 Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	stained Le , 2, 4A, a st (B11) Invertebra en Sulfide d Rhizosp ee of Redu fron Redu or Stress explain in nches): nches): nches): nches):	ates (B13) Odor (C1) heres alongued Iron (Cition in Till ed Plants (Remarks)	g Living C4) ed Soils D1) (LRI	(C6) R A) Vetland Hyd	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade		(City/Cour	nty: <u>Bellevue/</u>	King	Samplin	ıg Date: <u>4/18/2019 </u>	
Applicant/Owner: King County Wastewa	iter Treatment D	ivision			State: WA	Samplin	g Point: WGSP3	
Investigator(s): Brooke Oneill PWS/ Ros	se Whitson	:	Section,	Township, Ra	inge: <u>S21 T24N R</u>	:5E		
Landform (hillslope, terrace, etc.): hillslo							Slope (%):8	
							Datum: WGS19	84
Soil Map Unit Name: Alderwood and Kit					-			
Are climatic/hydrologic conditions on the		•					110	
• •		-			•	,	⊠ N-□	
Are Vegetation ☐, Soil ☐, or Hydrology					Circumstances" pr		⊠ No □	
Are Vegetation ☐, Soil ☐, or Hydrology	y ∐ naturally pr	oblematic?	((If needed, ex	plain any answers	s in Remarks.)		
SUMMARY OF FINDINGS – Att	ach site ma	p showing	sampli	ing point l	ocations, tran	sects, import	tant features, e	etc.
Hydrophytic Vegetation Present?	Yes 🗌	No ⊠		Is the Sampl	ed Area			
Hydric Soil Present?	Yes 🗌	No 🖂		within a Wet		′es □ No 🏻	Ⅺ	
Wetland Hydrology Present?	Yes □	No 🛛	'	within a vvct	ana: i	es 🗆 🔣		
Remarks:								
Uphill from Wetland G on the far side	from the trail							
VEGETATION – Use scientific	names of pl	ants.						
Tree Stratum (Plot size: 30')		Absolute			Dominance Tes	t worksheet:		
		% Cover	Species		Number of Domi			
1. Alnus rubra			<u>Y</u>	FAC	That Are OBL, F	ACW, or FAC: 2	<u>2</u> (A)	
2. Acer macrophyllum			<u>Y</u>	FACU	Total Number of	Dominant		
3. Tsuga heterophylla			<u>N</u>	FACU	Species Across	All Strata:	<u>5</u> (B)	
4. <u>Thuja plicata</u>		<u>2</u> 87	N = Total (FAC	Percent of Domi	nant Species		
		<u>07</u>	- Total C	Covei	That Are OBL, F	ACW, or FAC: 4	<u>40</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					Prevalence Inde	ex worksheet:		
1. Oemlaria cerasiformis		<u>20</u>	<u>Y</u>	<u>FACU</u>	Total % Co	over of:	Multiply by:	_
2. <u>Rubus armeniacus</u>		<u>5</u>	<u>N</u>	<u>FAC</u>	OBL species		x 1 =	_
3. Rubus spectabilis		<u>5</u>	<u>N</u>	<u>FAC</u>	FACW species)	x 2 =	
4							x 3 =	
5							x 4 =	
		<u>30</u>	= Total (Cover			x 5 =	
<u>Herb Stratum</u> (Plot size: <u>5'</u>)								
Polystichum munitum		<u>15</u>	<u>Y</u>	<u>FACU</u>	Column Totals.	(/	A)	_ (D)
Hydrophyllum tenuipes		<u> </u>	<u>Y</u>	FAC	Prevalence	e Index = B/A = _		
Equisetum telmateia		<u> </u>	<u>N</u>	<u>FACW</u>				
4						getation Indicato		
5.					· ·	est for Hydrophytic	Vegetation	
6 7.					1=	ice Test is >50%		
•					_	nce Index is ≤3.01	s1 (Provide supporti	ina
_						emarks or on a se		ng
The state of the s			-			Non-Vascular Pla		
10 11					☐ Problemation	Hydrophytic Veg	etation¹ (Explain)	
· · ·		22	= Total (Cover	¹ Indicators of hyd	dric soil and wetla	nd hydrology must	be
		<u></u>	rotart	00101	present, unless	disturbed or proble	ematic.	
Woody Vine Stratum (Plot size: 15')								
1					Hydrophytic			
2				_ —	Vegetation Present?	Yes □	No ⊠	
			= Total (Cover	i resent!	169 🖂	110 🖂	
% Bare ground in Herb Stratum <u>0 - cove</u>	ered in leaf litter							
Remarks:								

SOIL Sampling Point WGSP3

Profile	e Description: (Describe	to the de	pth needed			or confirm	n the absend	ce of indicators.)	
	Matrix			Redox Fe	eatures					
Dep (inch		%	Color (moist) %	Type ¹	Loc ²	Texture		Remarks	3
0-		100			- 		loam			
<u>8-</u> 1	6 10YR 6/1	<u>40</u>	7.5YR 4/6	<u>10</u>	<u>C</u>	<u>M</u>	clay loam	mixed matrix		
	10YR 2/1	<u>25</u>		<u>=</u>	<u>=</u>	<u>=</u>	<u>-</u>	part of mixed r	natrix	
l	5YR 4/3	<u>25</u>		<u>=</u>	=	=		part of mixed r	natrix	
l										
l										
	_							_		
¹ Type	: C=Concentration, D=Dep	letion, RM	/I=Reduced	Matrix, CS=Cover	ed or Coate	d Sand G		² Location: P		
Hydri	c Soil Indicators: (Applic	able to al	I LRRs, un	less otherwise no	oted.)		Indica	ators for Proble	natic Hydric	: Soils³:
	listosol (A1)			dy Redox (S5)				2 cm Muck (A10)		
	listic Epipedon (A2)			oped Matrix (S6)	(- 1) (Red Parent Mater	. ,	- 40)
	lack Histic (A3) lydrogen Sulfide (A4)			my Mucky Mineral my Gleyed Matrix	. ,	ot MLRA	•	Very Shallow Dar	•	-12)
	lepleted Below Dark Surfa	ce (A11)		leted Matrix (F3)	(Г2)			Other (Explain in	Remarks)	
	hick Dark Surface (A12)	00 (/ (/ / /		ox Dark Surface (F6)		³ Indic	ators of hydrophy	tic vegetatio	n and
	andy Mucky Mineral (S1)			leted Dark Surface				and hydrology mi	_	
□ s	andy Gleyed Matrix (S4)		Red	ox Depressions (F	- 8)		unle	ss disturbed or p	oblematic.	
Restr	ctive Layer (if present):									
Type:				<u>—</u>						
Depth	(inches):						Hydric S	oil Present?	Yes 🗌	No ⊠
Rema	rks:						•			
The 2	nd layer is jumbled. It appea	ars disturb	oed, with a r	mixture of hydric s	oils with reli	ct redoxim	norphic featur	es mixed with up	and soils.	
HYDF	ROLOGY									
Wet	land Hydrology Indicato	rs:								
Prin	nary Indicators (minimum o	of one req	uired; check	(all that apply)				Secondary Indica	ators (2 or m	ore required)
	Surface Water (A1)	-] Water-Stained L	eaves (B9)	(except		☐ Water-Staine		
	High Water Table (A2)			MLRA 1, 2, 4A,		` •		4A, and 4B)	,	, ,
	Saturation (A3)] Salt Crust (B11))			☐ Drainage Pa	terns (B10)	
	Water Marks (B1)			Aquatic Inverteb	orates (B13)			☐ Dry-Season	Nater Table	(C2)
	Sediment Deposits (B2)] Hydrogen Sulfid	le Odor (C1)			☐ Saturation Vi	sible on Aeri	al Imagery (C9)
	Drift Deposits (B3)			Oxidized Rhizos	spheres alor	g Living F	Roots (C3)	☐ Geomorphic	Position (D2)
	Algal Mat or Crust (B4)			Presence of Re	duced Iron (C4)		☐ Shallow Aqu	tard (D3)	
	Iron Deposits (B5)			Recent Iron Rec				☐ FAC-Neutral		
	Surface Soil Cracks (B6)			Stunted or Stres		(D1) (LRF	R A)	Raised Ant N		
	Inundation Visible on Aeria		-	Other (Explain in	n Remarks)			☐ Frost-Heave	Hummocks ((D7)
	Sparsely Vegetated Conca	ave Surfac	e (B8)			1				
	d Observations:			5 " "						
	face Water Present?	Yes 🗌	No ⊠	Depth (inches):						
	er Table Present?	Yes 🗌	No ⊠	Depth (inches):						. 57
	uration Present? ludes capillary fringe)	Yes 🗌	No 🛚	Depth (inches):		w	etland Hydro	ology Present?	Yes 🗌	No ⊠
	cribe Recorded Data (stre	am gauge	, monitoring	well, aerial photo	s, previous	inspection	ns), if availabl	le:		
Ren	narks:									
Dan	np, but not saturated.									

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade		(City/County	r: <u>Bellevue/k</u>	King	Samplin	g Date: <u>2/28/18</u>
Applicant/Owner: King County Wastewa	ter Treatment D	Division			State: WA	Samplin	g Point: WHSP1
Investigator(s): Forrest Parsons, PWS/S	Suzanne Ball		Section, To	wnship, Ra	nge: <u>S21 T24N R5</u>	ΣΕ.	
Landform (hillslope, terrace, etc.): Ravir	ne	I	_ocal relief	(concave, c	onvex, none): <u>Non</u>	ne	Slope (%): <u>0</u>
Subregion (LRR): A		Lat: <u>47°</u> ;	33'8.16"N		Long: <u>122° 9'53.</u>	.24"W	Datum: WGS84
Soil Map Unit Name: Alderwood and Kit	sap soils, very	steep			NWI c	classification: Nor	ne
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes ⊠	No 🗌	(If no, explain	in Remarks.)	
Are Vegetation \square , Soil \square , or Hydrolog	y 🗌 significantl	y disturbed?	Ar	e "Normal C	Circumstances" pre	esent? Yes	No □
Are Vegetation \square , Soil \square , or Hydrolog	y 🗌 naturally p	roblematic?	(If	needed, ex	plain any answers	in Remarks.)	
SUMMARY OF FINDINGS – Att	ach site ma	p showing	samplin	g point lo	ocations, trans	sects, import	ant features, etc.
Hydrophytic Vegetation Present?	Yes ⊠	No □					
Hydric Soil Present?	Yes ⊠	No 🗆		the Sample		_	_
Wetland Hydrology Present?	Yes ⊠	No 🗆	wi	thin a Wetl	and? Ye	es⊠ No [
Remarks:							
Study Area 3							
VEGETATION - Use scientific	names of p	lants.					
					Dominance Test	worksheet:	
<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1		· · · · · · · · · · · · · · · · · · ·	Species?	<u>Status</u>	Number of Domin		<u>2</u> (A)
2					Total Number of [Dominant	
3					Species Across A		<u>2</u> (B)
4		<u>0</u>	= Total Co		Percent of Domin That Are OBL, FA		100 (A/B)
Sapling/Shrub Stratum (Plot size: 15')					Prevalence Inde		
1. Rubus spectabilis		<u>60</u>	<u>Y</u>	FAC	Total % Cov	ver of:	Multiply by:
2					OBL species _	>	< 1 =
3					FACW species _	>	< 2 =
4							<pre>< 3 =</pre>
5					FACU species _	>	< 4 =
Herb Stratum (Plot size: 5')		<u>60</u>	= Total Co	over	UPL species _	>	< 5 =
Ranunculus repens		<u> 15</u>	N	FAC	Column Totals: _	(/	A) (E
Phalaris arundinacea		<u>15</u> 80	<u>N</u> <u>Y</u>	FACW			
3			<u> </u>		Prevalence	Index = $B/A = _$	
4.					Hydrophytic Veg	getation Indicato	ors:
5					☐ 1- Rapid Tes	st for Hydrophytic	Vegetation
6						ce Test is >50%	
7.						ce Index is ≤3.0¹	-1 (Danside essential)
8					☐ 4 - Morpholo data in Re	gicai Adaptations emarks or on a se	s ¹ (Provide supporting parate sheet)
9. 10						Non-Vascular Pla	
11.					☐ Problematic	Hydrophytic Veg	etation1 (Explain)
		95	= Total Co	ver			nd hydrology must be
					present, unless di	isturbed or proble	ematic.
Woody Vine Stratum (Plot size: 15')							
1					Hydrophytic Vegetation		
2			= Total Co		Present?	Yes ⊠	No □
% Bare ground in Herb Stratum 5		<u>U</u>	- rotar ot	,,,,,,			
, a = a. a gradina in Florid Officialin o					1		

SOIL Sampling Point WHSP1

Profile Des	scription: (Describe	to the de	pth needed	to docun	nent the	indicator	or confi	rm the	absenc	e of indicato	rs.)			
	Matrix			R	edox Fea	tures		_						
Depth	Color (moist)													
(inches)		%	Color (moist)	%	Type ¹	Loc ²					emarks		
<u>0-2</u>	10YR 3/2	<u>100</u>	-					sanc	<u>ly loam</u>					
<u>2-10</u>	10YR 5/2	<u>90</u>	10YR 5/8		<u>10</u>	<u>C</u>	<u>M</u>	clay	loam					
			-											
														_
¹Type: C=C	Concentration, D=Dep	letion RM	M-Reduced	Matrix CS	S=Covere	d or Coate	ed Sand (Grains		² l ocation	· PI =Po	re I inin	g, M=Matrix	
	I Indicators: (Applic						od Odna (Oranio.		ators for Prol				
☐ Histos	ol (A1)		☐ San	dy Redox	(S5)	,			_	2 cm Muck (A		•		
	Epipedon (A2)			ped Matri						Red Parent Ma	,	F2)		
	Histic (A3)			•	` '	F1) (exce	pt MLRA	(1)		ery Shallow I	•	,	- 12)	
	gen Sulfide (A4)			ny Gleyed			•	,		Other (Explain		•	,	
	ted Below Dark Surface	ce (A11)	□ Dep	leted Matr	ix (F3)									
☐ Thick	Dark Surface (A12)		Red	ox Dark S	urface (F	6)			³ Indica	ators of hydro	phytic ve	getation	n and	
-	Mucky Mineral (S1)			leted Dark						and hydrology			t,	
☐ Sandy	Gleyed Matrix (S4)		☐ Red	ox Depres	sions (F8	3)			unles	ss disturbed o	r problen	natic.		
Restrictive	Layer (if present):													
Depth (inch	nes):			_				Н	ydric S	oil Present?	Yes	\boxtimes	No 🗌	
Remarks:														
HYDROL	OGY													
	Hydrology Indicator	· · ·												
	Indicators (minimum o		uirad: abaak	all that ar	(برامد					Cocondon/In	diantora ((2 or m	oro roquirod)	١
	•	one requ				(DO)	/			Secondary In				
	ce Water (A1)					aves (B9)	(except			☐ Water-Sta		ives (B	9) (MLRA 1,	, 2,
_	Water Table (A2)		_		, 2, 4A, a	nd 4B)				4A, and 4	-	(5.40)		
	ration (A3)			Salt Cru	` ,					☐ Drainage			(- -)	
	r Marks (B1)			•		ates (B13)				☐ Dry-Seas				
	nent Deposits (B2)					Odor (C1)				Saturation			0 , (C9)
	Deposits (B3)					heres alor	-	Roots		Geomorp			1	
☐ Algal	Mat or Crust (B4)			Presenc	e of Redu	uced Iron ((C4)			☐ Shallow A				
☐ Iron [Deposits (B5)			Recent I	ron Redu	iction in Ti	lled Soils	s (C6)		☐ FAC-Neu	tral Test	(D5)		
☐ Surfa	ce Soil Cracks (B6)			Stunted	or Stress	ed Plants	(D1) (LR	RA)		☐ Raised A	nt Mound	s (D6)	(LRR A)	
☐ Inund	lation Visible on Aeria	I Imagery	(B7)	Other (E	xplain in	Remarks)				☐ Frost-Hea	ave Humr	nocks (D7)	
☐ Spars	sely Vegetated Conca	ve Surfac	e (B8)											
Field Ob	servations:													
Surface \	Water Present?	Yes 🗌	No 🖂	Depth (ii	nches): _									
Water Ta	able Present?	Yes 🗌	No 🖂	Depth (ii	nches): _									
Saturatio	n Present?	Yes 🗌	No 🛛	Depth (ii	nches): _		\	Wetlan	d Hydro	ology Presen	t? Y	′es ⊠	No 🗌	
	capillary fringe)							> ''						
Describe	Recorded Data (stream	am gauge	, monitoring	well, aeri	aı pnotos	, previous	inspectio	ons), if	available	e:				
<u> </u>														
Remarks														
Wetland	located below drift lin	es of coal	creek											

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade		(City/Cour	nty: <u>Bellevue/l</u>	King	Sar	npling Da	te: <u>2/28/18</u>	
Applicant/Owner: King County Wastewa	Division			State: WA	San	npling Po	int: WHSP2		
Investigator(s): Forrest Parsons, PWS/S	Suzanne Ball		Section,	Township, Ra	nge: <u>S21 T24N R</u>	R5E			
Landform (hillslope, terrace, etc.): Ravin	ne	I	Local reli	ef (concave, o	convex, none): <u>Co</u>	onvex		Slope (%): <u>0</u>	
Subregion (LRR): A		Lat: <u>47°</u> ;	33'8.15"N	N	_ Long: <u>122° 9'5</u>	2.87"W	D	atum: WGS8	4
Soil Map Unit Name: Alderwood and Kit	sap soils, very	steep			NWI	classification	: None		
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes [⊠ No □	(If no, explair	n in Remarks.)		
Are Vegetation □, Soil □, or Hydrology	y 🗌 significantl	y disturbed?		Are "Normal (Circumstances" p	resent?	Yes 🛚	No 🗌	
Are Vegetation ☐, Soil ☐, or Hydrology	y 🗌 naturally p	roblematic?		(If needed, ex	plain any answer	s in Remarks	.)		
SUMMARY OF FINDINGS – Att	ach site ma	p showing	sampli	ing point l	ocations, trar	nsects, imp	ortant	features,	etc.
		🗖							
Hydrophytic Vegetation Present?	Yes 🗌	No ⊠	1	Is the Sample	ed Area				
Hydric Soil Present?	Yes 🗌	No ⊠	,	within a Wetl	and?	Yes □	No 🛛		
Wetland Hydrology Present?	Yes 🗌	No 🛛							
Remarks:									
Study Area 3									
VEGETATION – Use scientific	names of p	lants.							
		Absolute		ant Indicator	Dominance Tes	st worksheet:			
<u>Tree Stratum</u> (Plot size: 30')		% Cover	-		Number of Dom				
1. Alnus rubra			<u>Y</u>	<u>FAC</u>	That Are OBL, F	ACW, or FAC	: <u>1</u> (A)		
2					Total Number of	Dominant			
3 4					Species Across	All Strata:	<u>3</u> (B)		
4.		<u>70</u>	= Total (Cover	Percent of Domi				
		<u>10</u>	- rotar	00701	That Are OBL, F			/B)	
Sapling/Shrub Stratum (Plot size: 15')					Prevalence Ind				
1. Rubus ursinus			<u>Y</u>	<u>FACU</u>	Total % Co	over of:	N	Multiply by:	_
2					OBL species		x 1 =		_
3					FACW species				
4 5.								210	
<u> </u>		10	= Total (Cover	FACU species				_
Herb Stratum (Plot size: 5')					UPL species				_
Polystichum munitum		100	<u>Y</u>	<u>FACU</u>	Column Totals:	180	(A)	<u>650</u>	_ (B)
2					Prevalence	e Index = B/A	- 36		
3					1 Tevaleries	C IIIdeX = D/A	- <u>5.0</u>		
4			-		Hydrophytic Ve	egetation Ind	icators:		
5					l	est for Hydrop		etation	
6						nce Test is >5			
7					_	nce Index is ≤		rovide support	tina
8					data in R	Remarks or on	a separa	ite sheet)	ung
10.						d Non-Vascula		,	
11.					☐ Problemation	c Hydrophytic	Vegetation	on¹ (Explain)	
		100	= Total (Cover	¹ Indicators of hy				be
					present, unless	disturbed or p	roblemat	IC.	
Woody Vine Stratum (Plot size: 15')									
					Hydrophytic Vegetation				
1					LVACATATION				
1 2			T_1-1:			Yes □	1	No ⊠	
		<u>0</u>	= Total (Cover	Present?	Yes []	No ⊠	

SOIL Sampling Point WHSP2

Depth	Color (moist)										
(inches)	Color (IIIolat)	<u>%</u>	Color (ı	noist)	%	Type ¹	Loc ²	<u>Texture</u>		Remarks	3
<u>0-14</u>	10YR 4/3	<u>100</u>	•					silty clay			
								loam			
 -		· -									
 -											
		. <u> </u>							<u> </u>		
		·									
ype: C=Cor	ncentration, D=Dep	letion, RM:	=Reduced	Matrix, CS=	:Covered	or Coate	d Sand G			PL=Pore Linir	
dric Soil I	ndicators: (Applic	able to all	LRRs, unl	ess otherw	ise note	d.)		Indi	cators for Proble	ematic Hydric	: Soils ³ :
Histosol	, ,		☐ Sand	dy Redox (S	85)				2 cm Muck (A10	,	
	pipedon (A2)			ped Matrix	` '				Red Parent Mate	, ,	
Black Hi				ny Mucky M			t MLRA	_	Very Shallow Da	•	F12)
	n Sulfide (A4)			ny Gleyed N	•	2)			Other (Explain in	n Remarks)	
	d Below Dark Surfa	ce (A11)	-	eted Matrix	` '			31 .		and a constant	
	ark Surface (A12)			ox Dark Sur	, ,				icators of hydroph		
•	Mucky Mineral (S1) Gleyed Matrix (S4)			eted Dark S ox Depressi	•	-7)			tland hydrology mess disturbed or p		π,
	ayer (if present):		☐ Keut	y Deblessi	0115 (1-0)			l un	ess disturbed or p	problematic.	
	ayer (ii present).										
				_				Lludria	Soil Present?	Yes □	No ⊠
	s):			_				Hydric	Juli Fresent:	162 🗀	NO 🖂
emarks:											
/DROLO											
	ydrology Indicato										
/DROLO Wetland H Primary Inc	ydrology Indicato dicators (minimum o								Secondary India		
OROLO Wetland H Primary Inc □ Surface	ydrology Indicato dicators (minimum o e Water (A1)			Water-Sta	ined Lea		(except		☐ Water-Stair	ned Leaves (B	
/DROLO Wetland H Primary Inc □ Surface □ High W	ydrology Indicato dicators (minimum o Water (A1) ater Table (A2)			Water-Sta	ined Leav 2, 4A, an		(except		☐ Water-Stair	ned Leaves (B	
TDROLO Wetland H Primary Inc □ Surface □ High W □ Saturati	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3)			Water-Sta MLRA 1, 2 Salt Crust	ined Lea 2, 4A, an (B11)	d 4B)	(except		Water-Stair 4A, and 4B Drainage Pa	ned Leaves (B i) atterns (B10)	9) (MLRA 1,
/DROLO Wetland H Primary Inc □ Surface □ High W □ Saturati □ Water N	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)			Water-Sta MLRA 1, 2 Salt Crust Aquatic In	nined Lear 2, 4A, an (B11) vertebrat	d 4B) es (B13)			Water-Stair 4A, and 4B Drainage Pa	ned Leaves (B i) atterns (B10) n Water Table	9) (MLRA 1, (C2)
VDROLO Wetland H Primary Inc □ Surface □ High W □ Saturati □ Water M □ Sedime	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)			Water-Sta MLRA 1, 2 Salt Crust Aquatic In Hydrogen	nined Lear 2, 4A, an (B11) vertebrate Sulfide C	d 4B) es (B13) Odor (C1)			Water-Stair 4A, and 4B Drainage Portion Dry-Season Saturation	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri	9) (MLRA 1, (C2)
'DROLO Wetland H Primary Inc □ Surface □ High W □ Saturati □ Water M □ Sedime □ Drift De	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)			Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I	nined Lear 2, 4A, and (B11) vertebrate Sulfide Can Rhizospho	d 4B) es (B13) Odor (C1) eres alon	g Living	Roots (C3)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation V Geomorphic	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri c Position (D2	9) (MLRA 1, (C2)
Primary Inc Surface High W Saturati Water № Sedime Drift De Algal M	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)			Water-Sta MLRA 1, 2 Salt Crust Aquatic In Hydrogen	nined Lear 2, 4A, and (B11) vertebrate Sulfide C	d 4B) es (B13) Odor (C1) eres alon	g Living	Roots (C3)	Water-Stair 4A, and 4B Drainage Po Dry-Season Saturation	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri c Position (D2	9) (MLRA 1, (C2)
TDROLO Wetland H Primary Inc □ Surface □ High W □ Saturati □ Water N □ Sedime □ Drift De □ Algal M □ Iron De	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5)			Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	nined Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizospho of Reduct	es (B13) Odor (C1) eres alon eed Iron (Contion in Til	g Living C4) led Soils	(C6)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation V Geomorphic	ned Leaves (B i) atterns (B10) i Water Table Visible on Aeri c Position (D2 uitard (D3)	9) (MLRA 1, (C2)
VDROLO Wetland H Primary Inc □ Surface □ High W □ Saturati □ Water N □ Sedime □ Drift De □ Algal M □ Iron De □ Surface	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) at or Crust (B4) posits (B5) e Soil Cracks (B6)	of one requ		Water-Stat MLRA 1, 2 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	nined Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizospho of Reduct on Reduct r Stressec	es (B13) Ddor (C1) eres alon ed Iron (C) tion in Til d Plants (C)	g Living C4) led Soils	(C6)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B atterns (B10) Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6)	9) (MLRA 1, (C2) al Imagery (C) (LRR A)
/DROLO Wetland H Primary Inc □ Surface □ High W □ Saturati □ Water M □ Sedime □ Drift De □ Algal M □ Iron De □ Surface □ Inundat	ydrology Indicato dicators (minimum of w Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria	of one requ	(B7)	Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	nined Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizospho of Reduct on Reduct r Stressec	es (B13) Ddor (C1) eres alon ed Iron (C) tion in Til d Plants (C)	g Living C4) led Soils	(C6)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B atterns (B10) Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5)	9) (MLRA 1, (C2) (al Imagery (
Metland H Primary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel	ydrology Indicatoric dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aerially Vegetated Concar	of one requ	(B7)	Water-Stat MLRA 1, 2 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	nined Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizospho of Reduct on Reduct r Stressec	es (B13) Ddor (C1) eres alon ed Iron (C) tion in Til d Plants (C)	g Living C4) led Soils	(C6)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B atterns (B10) Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6)	9) (MLRA 1, (C2) (al Imagery (
VDROLO Wetland H Primary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat	ydrology Indicato dicators (minimum of w Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria	of one requ al Imagery (ave Surface	(B7) (B8)	Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	nined Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizosphe of Reduce on Reduce r Stressed	es (B13) Odor (C1) eres alon eed Iron (Ction in Til d Plants (emarks)	g Living C4) led Soils D1) (LRI	(C6)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B atterns (B10) Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6)	9) (MLRA 1, (C2) al Imagery (C) (LRR A)
Metland H Primary Inc Surface High W Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel	ydrology Indicato dicators (minimum of w Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria	of one requ	(B7)	Water-Stat MLRA 1, 2 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	nined Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizosphe of Reduce on Reduce r Stressed	es (B13) Odor (C1) eres alon eed Iron (Ction in Til d Plants (emarks)	g Living C4) led Soils D1) (LRI	(C6)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B atterns (B10) Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6)	9) (MLRA 1, (C2) al Imagery (C) (LRR A)
Metland H Primary Inc Surface High W Saturati Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obse	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Concae ervations: ater Present?	of one requ al Imagery (ave Surface	(B7) (B8)	Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed plain in R	es (B13) Odor (C1) eres alon ed Iron (Ction in Til d Plants (emarks)	g Living C4) led Soils D1) (LR I	(C6)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B atterns (B10) Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6)	9) (MLRA 1, (C2) al Imagery (C) (LRR A)
Wetland H Primary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obse Surface Water Tabl Saturation	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Conca ervations: ater Present? Present?	al Imagery (ave Surface	(B7)	Water-Stat MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Lear 2, 4A, and (B11) Evertebrate Sulfide C Rhizospho of Reduct on Reduct on Reduct or Stressed plain in R ches): ches):	es (B13) Odor (C1) eres alon ed Iron (i tion in Til d Plants (emarks)	g Living C4) led Soils D1) (LRI	(C6) R A)	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6) e Hummocks	9) (MLRA 1, (C2) al Imagery (C) (LRR A)
Metland H Primary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obse Surface Wa Water Tabl Saturation (includes ca	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Conca ervations: ater Present? Present? apillary fringe)	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	(B7)	Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizospho of Reduct on Reduct r Stressed plain in R ches): ches):	es (B13) Ddor (C1) eres alon ed Iron (tion in Til d Plants (emarks)	g Living C4) led Soils D1) (LRI	(C6) R A) Vetland Hyd	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6) e Hummocks	9) (MLRA 1, (C2) al Imagery (() (LRR A) (D7)
Metland H Primary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obse Surface Wa Water Tabl Saturation (includes ca	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Conca ervations: ater Present? Present?	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	(B7)	Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizospho of Reduct on Reduct r Stressed plain in R ches): ches):	es (B13) Ddor (C1) eres alon ed Iron (tion in Til d Plants (emarks)	g Living C4) led Soils D1) (LRI	(C6) R A) Vetland Hyd	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6) e Hummocks	9) (MLRA 1, (C2) al Imagery (() (LRR A) (D7)
Metland H Primary Inc Surface High W Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obse Surface Wa Water Tabl Saturation (includes co	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Conca ervations: ater Present? Present? apillary fringe)	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	(B7)	Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed plain in R ches): ches):	es (B13) Ddor (C1) eres alon ed Iron (tion in Til d Plants (emarks)	g Living C4) led Soils D1) (LRI	(C6) R A) Vetland Hyd	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6) e Hummocks	9) (MLRA 1, (C2) al Imagery (C)) (LRR A) (D7)
Metland H Primary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obse Surface Wa Water Tabl Saturation (includes ca	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Conca ervations: ater Present? e Present? Present? apillary fringe)	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	(B7)	Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed plain in R ches): ches):	es (B13) Ddor (C1) eres alon ed Iron (tion in Til d Plants (emarks)	g Living C4) led Soils D1) (LRI	(C6) R A) Vetland Hyd	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6) e Hummocks	9) (MLRA 1, (C2) al Imagery (() (LRR A) (D7)
Wetland H Primary Inc □ Surface □ High W □ Saturati □ Water N □ Sedime □ Drift De □ Algal M □ Iron De □ Surface □ Inundat □ Sparsel Field Obse Surface Water Tabl Saturation (includes co	ydrology Indicato dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Conca ervations: ater Present? e Present? Present? apillary fringe)	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	(B7)	Water-State MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Lear 2, 4A, and (B11) vertebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed plain in R ches): ches):	es (B13) Ddor (C1) eres alon ed Iron (tion in Til d Plants (emarks)	g Living C4) led Soils D1) (LRI	(C6) R A) Vetland Hyd	Water-Stair 4A, and 4B Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B i) atterns (B10) n Water Table Visible on Aeri c Position (D2 uitard (D3) al Test (D5) Mounds (D6) e Hummocks	9) (MLRA 1, (C2) al Imagery () (LRR A) (D7)

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade		(City/Coun	ity: <u>Bellevue/l</u>	King	Sampling	Date: <u>11/14/2019</u>
Applicant/Owner: King County Wastewa	<u>ater Treatment D</u>	Division			State: WA	_ Sampling	Point: WISP1
Investigator(s): Rose Whitson / Amy Ro	tondo	;	Section, 1	Township, Ra	ange: <u>S21 T24N R5E</u>		
Landform (hillslope, terrace, etc.): terrace							
					_ Long: <u>122°9'53.138"V</u>		
Soil Map Unit Name: Alderwood and Kit						fication: <u>None</u>	!
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar?Yes 🏻	⊠ No □	(If no, explain in Re	marks.)	
Are Vegetation \square , Soil \square , or Hydrology	y 🔲 significantl	y disturbed?	A	Are "Normal (Circumstances" present?	? Yes ⊠	No □
Are Vegetation ☐, Soil ☐, or Hydrology	y 🗌 naturally pı	roblematic?	((If needed, ex	cplain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Att	tach site ma	p showing	sampli	ng point l	ocations, transect	s, importa	nt features, etc.
Lludranhutia Vagatatian Pragant?	Yes ⊠	No 🗆					
Hydrophytic Vegetation Present? Hydric Soil Present?	res ⊠ Yes ⊠	No □	ls	s the Sample	ed Area		
Wetland Hydrology Present?	Yes ⊠	No 🗆	v	within a Wetl	land? Yes ⊠	No 🗌	
Remarks:	100 🖂	140 🗀					
Near maintenance hole, next to drain	age nattern and	d south of Coal	Creek				
Treat maintenance note, next to drain	age pattern, and	a south of ooal	Orcck.				
VECETATION Lies esigntific	namaa af ni	lonto					
VEGETATION – Use scientific	names of pr						
Tree Stratum (Plot size: 30')		Absolute % Cover			Dominance Test work	(sheet:	
			Opecies	<u> Status</u>	Number of Dominant S		
1					That Are OBL, FACW,	or FAC: <u>2</u> (A)
3.					Total Number of Domir		'D\
4.					Species Across All Stra	ata: <u>2</u> (В)
		<u>0</u>	= Total C	Cover	Percent of Dominant S		O (A/B)
Sapling/Shrub Stratum (Plot size: 15')					That Are OBL, FACW, Prevalence Index wor		<u>0</u> (A/B)
, , , , , , , , , , , , , , , , , , , ,		26	V	FAC	Total % Cover of		Multiply by:
Rubus spectabilis Rubus armeniacus			<u>Y</u> <u>N</u>	<u>FAC</u> FAC			
Rubus armeniacus Thuja plicata (sapling)			<u>N</u>	FAC	OBL species		
4. Tsuga heterophylla (sapling)			<u>N</u>	FACU	FACW species		
5. Picea sitchensis (sapling)			<u>N</u>	FAC	FACIL appeirs		
		<u>30</u>	= Total C	Cover	FACU species		
Herb Stratum (Plot size: 5')					UPL species		
Tolmiea menziesii		<u>80</u>	<u>Y</u>	<u>FAC</u>	Column Totals:	(A)	(B)
Athyrium cyclosorum		<u>20</u>	<u>N</u>	<u>FAC</u>	Prevalence Index	c = B/A =	
3. <u>Urtica dioica</u>			<u>N</u>	<u>FAC</u>			
Phalaris arundinacea 5.		<u>5</u>	<u>N</u>	<u>FAC</u>	Hydrophytic Vegetati		
6.			-		☐ 1- Rapid Test for I☑ 2- Dominance Test		egetation
7.			-		☐ 3 - Prevalence Inc		
8.				<u> </u>	_		(Provide supporting
9.					data in Remark	•	,
10					5 - Wetland Non-\		
11					☐ Problematic Hydro	-	
		<u>120</u>	= Total C	Cover	¹ Indicators of hydric so present, unless disturb		
Woody Vine Stratum (Plot size: 15')					present, unless disturb	ed of problem	iatio.
,							
1.			-		Hydrophytic Vegetation		
			= Total C	Cover	Present?	Yes ⊠	No 🗌
% Bare ground in Herb Stratum <u>0</u>			- 10.				
Remarks:					L		
Big-leaf maples were present and rooted	d out of the wetl	and.					
, , , , , , , , , , , , , , , , , , , ,	•						

SOIL Sampling Point WISP1

Profile De	scription: (Describe	to the de	epth needed	to docun	nent the	indicator c	r confi	rm the	absence	of indicators	s.)	
	Matrix		<u></u>		edox Fea			_				
Depth	Color (moist)							=				
(inches)	- <u>- </u>	%	Color (moist)		Type ¹	Loc ²	Te	exture		Remar	rks
<u>0-11</u>	10YR 3/1	<u>53</u>	7.5Y 3/4		<u>7</u>	<u>C</u>	<u>M</u>	<u>loam</u>				
	10YR 3/2	<u>40</u>						sand		sand deposit		
<u>11-16</u>	10YR 3/2	<u>75</u>	5YR 3/4		<u>25</u>	<u>C</u>	M	sand		with small gr	avels	
<u>16-24</u>	5Y 3/1	<u>85</u>	5YR 3/4		<u>15</u>	<u>C</u>	M	sand	y loam			
-						<u> </u>						
¹Type: C=C	Concentration, D=Dep	letion RI	M=Reduced	Matrix CS	S=Covere	d or Coated	d Sand I	Grains		² I ocation:	PI =Pore Lir	ning, M=Matrix.
	il Indicators: (Applic						Joanu	Oranis.		ors for Probl		
-	sol (A1)			dy Redox		· · · · /				cm Muck (A10	-	
	Epipedon (A2)			ped Matri						ed Parent Mat	-	
	Histic (A3)					F1) (excep	t MLRA	\ 1)		ery Shallow Da	, ,	(TF12)
	gen Sulfide (A4)			ny Gleyed				,		ther (Explain i		,
☐ Deple	ted Below Dark Surfa	ce (A11)		leted Matr								
	Dark Surface (A12)			ox Dark S						tors of hydrop		
-	Mucky Mineral (S1)			leted Dark						nd hydrology r		
	Gleyed Matrix (S4)		Red	ox Depres	sions (F8	5)			unless	s disturbed or	problematic.	•
Restrictive	e Layer (if present):											
Depth (incl	hes):			<u> </u>				Hy	ydric So	il Present?	Yes 🛚	No □
Remarks:												
Sediment I	ayering from the cree	k. Oxidize	ed rhixosphe	res are pre	esent.							
HYDROL	OGY											
	Hydrology Indicato									\	:t (O	
	Indicators (minimum o	or one rec				(50)						more required)
	ace Water (A1)					aves (B9) (except		L			(B9) (MLRA 1, 2
_	Water Table (A2)		_		, 2, 4A, a	nd 4B)			F	4A, and 4E	•	
	ration (A3)			Salt Cru	` ,	. (5.10)			_	☑ Drainage P	,	,
	er Marks (B1)					ates (B13)				☐ Dry-Seaso		
	ment Deposits (B2)			. , .		Odor (C1)						erial Imagery (C
	Deposits (B3)					heres along		Roots	, ,	Geomorphi	,	02)
	Mat or Crust (B4)					uced Iron (C	,	(00)		☐ Shallow Ac		
	Deposits (B5)			_		ction in Till			_	FAC-Neutr	, ,	a) (1 == 4)
	ace Soil Cracks (B6)					ed Plants (D1) (LR	RR A)	L		Mounds (D6	
	dation Visible on Aeria) Other (E	xplain in	Remarks)			L	_ Frost-Heav	e Hummock	s (D7)
	sely Vegetated Conca	ave Surra	ce (B8)				-					
	oservations:		—									
Surface '	Water Present?	Yes 🗌	No 🛚	Depth (ii	′ –							
Water Ta	able Present?	Yes 🛚	No 🗌	Depth (ii	nches): <u>2</u>	4" BGS*						
	on Present?	Yes 🛚	No 🗌	Depth (ii	nches): <u>1</u> 2	2" BGS	'	Wetlan	d Hydrol	logy Present	? Yes 🛭	⊠ No □
	s capillary fringe) e Recorded Data (stre	am dalida	e monitorino	ı well aeri	al nhotos	nrevious i	nspectic	ons) if	available	•		
20001100		gaag	_,511110111119	,, 4011	p.1.0.005	, ,		<i>j</i> , ii 6		-		
Remarks	<u>.</u>											
	elow ground surface						-10	. 1.				
ine sam	ple plot was in a shal	iow depre	ession of a d	rainage pa	ittern that	iea into Co	oai Cree	eK.				
1												

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade			City/County: Bellevue/King				Sampling Date: <u>2/28/18</u>		
Applicant/Owner: King County Wastewater Treatment Division					State: WA	Sampling	· · · · ·		
Investigator(s): Forrest Parsons, PWS/S	Suzanne Ball		Section, Township, Range: S21 T24N R5E						
Landform (hillslope, terrace, etc.): Ravir									
Subregion (LRR): A									
Soil Map Unit Name: Alderwood and Kit									
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes ⊠	No 🗌	(If no, explain in Re	marks.)			
Are Vegetation □, Soil □, or Hydrolog					Circumstances" present?	Yes [⊠ No □		
Are Vegetation □, Soil □, or Hydrology	=	-	(If	needed, ex	xplain any answers in Re	emarks.)			
-									
SUMMARY OF FINDINGS – Att	ach site ma	p showing	sampling	g point lo	ocations, transect	s, importa	ant features, etc.		
	=	—							
Hydrophytic Vegetation Present?	Yes ⊠	No 🗆	ls t	he Sample	ed Area				
Hydric Soil Present?	Yes 🗌	No ⊠	wit	hin a Wetl	and? Yes □	No ⊠			
Wetland Hydrology Present?	Yes 🗌	No ⊠							
Remarks:									
Study Area 3									
VEGETATION - Use scientific	names of p	lants.							
		Absolute	Dominant	Indicator	Dominance Test worl	sheet:			
Tree Stratum (Plot size: 30')		% Cover	Species?	<u>Status</u>	Number of Dominant S	pecies			
1. Thuja plicata			<u>Y</u>	<u>FAC</u>	That Are OBL, FACW,		(A)		
2. Alnus rubra			<u>Y</u>	<u>FAC</u>	Total Number of Domir	nant			
3			-		Species Across All Stra	ata: <u>4</u>	(B)		
4		50	= Total Co		Percent of Dominant S				
		<u>50</u>	= Total Co	vei	That Are OBL, FACW,	or FAC: 75	<u>5</u> (A/B)		
Sapling/Shrub Stratum (Plot size: 15')					Prevalence Index wor	ksheet:			
1. Rubus armeniacus			<u>Y</u>	<u>FAC</u>	Total % Cover of	<u> </u>	Multiply by:		
2					OBL species	x	1 =		
3					FACW species	X	2 =		
4 5					FAC species				
5		<u> </u>	= Total Co	ver	FACU species				
Herb Stratum (Plot size: 5')		<u> </u>	- 10tai 00	• • • • • • • • • • • • • • • • • • • •	UPL species	X	5 =		
1. Polystichum munitum		25	<u>Y</u>	FACU	Column Totals:	(A) (B)		
Tolmeia menziesii		<u></u>	<u>N</u>	FAC	Brovolonoo Indov	, _ D/A _			
3					Frevalence index	X = D/A =			
4					Hydrophytic Vegetati	on Indicator	s:		
5					☐ 1- Rapid Test for I	Hydrophytic \	√egetation		
6			-		2- Dominance Tes				
7.					3 - Prevalence Inc		(Describe assessmentions		
8					data in Remark		(Provide supporting parate sheet)		
9. 10					☐ 5 - Wetland Non-\				
11.			-	-	□ Problematic Hydro	ophytic Vege	tation ¹ (Explain)		
		30	= Total Co	ver	¹ Indicators of hydric so				
		_			present, unless disturb	ed or probler	matic.		
Woody Vine Stratum (Plot size: 15')									
1					Hydrophytic				
2.					Vegetation	Vac M	No 🗆		
Z		_	T		Present/		NO I I		
% Bare ground in Herb Stratum <u>70</u>		<u>0</u>	= Total Co	ver	Present?	Yes ⊠	No □		

SOIL Sampling Point <u>WISP2</u>

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix			R	edox Fea	tures			
Depth	Color (moist)								
(inches)		<u>%</u>	Colo	(moist)	%	Type ¹	Loc ²	Texture	e Remarks
<u>0-14</u>	10YR 3/1	100						silty loam	
									_
¹ Type: C=C	oncentration, D=Depl	etion RM-	Reduce	d Matrix CS	S=Covere	d or Coated	Sand (Grains	² Location: PL=Pore Lining, M=Matrix.
	Indicators: (Applica						z Odila (icators for Problematic Hydric Soils ³ :
☐ Histoso				ndy Redox		,			2 cm Muck (A10)
	Epipedon (A2)			ripped Matri					Red Parent Material (TF2)
	Histic (A3)			amy Mucky	` '	F1) (evcen	+ MI RA	_	Very Shallow Dark Surface (TF12)
	en Sulfide (A4)			amy Gleyec			LIVILIXA	'',	Other (Explain in Remarks)
-	ed Below Dark Surfac	re (Δ11)		epleted Matr	•	_)			Other (Explain in Remarks)
	Dark Surface (A12))O (/ ())		edox Dark S		3)		3Inc	dicators of hydrophytic vegetation and
	Mucky Mineral (S1)		_	pleted Dark	`	,			etland hydrology must be present,
	Gleyed Matrix (S4)			edox Depres					nless disturbed or problematic.
	Layer (if present):		<u> </u>	AGN BOPIOG	0 1) 011010	/			nooc dictarbod of problematic.
_									
Depth (inche	es):							Hydric	Soil Present? Yes ☐ No ⊠
Remarks:								•	
HYDROLO	OGY								
Wetland	Hydrology Indicator	s:							
	ndicators (minimum o		rad: cha	ck all that a	anly)				Secondary Indicators (2 or more required)
	·	r one requi				(DO) (
	ce Water (A1)			☐ Water-S			except		Water-Stained Leaves (B9) (MLRA 1, 2,
_	Vater Table (A2)				, 2, 4A, a	nd 4B)			4A, and 4B)
Satura				☐ Salt Cru					Drainage Patterns (B10)
	Marks (B1)			☐ Aquatic	Invertebra	ates (B13)			☐ Dry-Season Water Table (C2)
☐ Sedim	ent Deposits (B2)			☐ Hydroge		(- ,			☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift D	eposits (B3)			☐ Oxidized	d Rhizosp	heres alon	g Living	Roots (C3)	☐ Geomorphic Position (D2)
☐ Algal I	Mat or Crust (B4)			Presenc	e of Redu	iced Iron (C	C4)		☐ Shallow Aquitard (D3)
☐ Iron D	eposits (B5)			☐ Recent I	ron Redu	ction in Till	ed Soils	(C6)	☐ FAC-Neutral Test (D5)
	ce Soil Cracks (B6)			 ☐ Stunted					Raised Ant Mounds (D6) (LRR A)
	ation Visible on Aeria	l Imagery (F		☐ Other (E			/ (Frost-Heave Hummocks (D7)
	ely Vegetated Conca		,						
	servations:	ve ounace	(D0)						
		·		5 (1					
	Vater Present?	Yes 🗌	No ⊠						
Water Tal	ble Present?	Yes 🗌	No 🛚	Depth (i	nches): _				
	n Present?	Yes 🗌	No 🛛	Depth (i	nches): _		\	Netland Hyd	drology Present? Yes ☐ No ⊠
	capillary fringe)								
Describe	Recorded Data (strea	am gauge, r	monitori	ng well, aeri	al photos	previous ii	nspectio	ons), if availa	able:
Remarks:									

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade		City/County	y: <u>Bellevue/</u> ł	g Date: <u>2/28/18</u>					
Applicant/Owner: King County Wastewater Treatment Division					Samplin	Sampling Point: WJSP1			
Investigator(s): Forrest Parsons, PWS/S	Suzanne Ball		Section, Township, Range: S21 T24N R5E						
Landform (hillslope, terrace, etc.): Ravin	ne	I	_ocal relief	(concave, c	convex, none): <u>Cor</u>	ncave	Slope (%): <u>20</u>		
Subregion (LRR): A		Lat: <u>47°3</u>	3'6.59"N		_ Long: <u>122° 9'51</u>	.84"W	Datum: WGS84	ļ.	
Soil Map Unit Name: Alderwood and Kit	sap soils, very	steep			NWI	classification: No	ne		
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes ⊠	No □	(If no, explain	in Remarks.)			
Are Vegetation □, Soil □, or Hydrology	y 🗌 significantl	y disturbed?	A	re "Normal C	Circumstances" pre	esent? Yes	⊠ No □		
Are Vegetation ☐, Soil ☐, or Hydrology	y 🔲 naturally p	roblematic?	(II	needed, ex	plain any answers	in Remarks.)			
SUMMARY OF FINDINGS – Att	ach site ma	p showing	samplin	g point lo	ocations, tran	sects, import	ant features, e	etc.	
	–	=							
Hydrophytic Vegetation Present?	Yes ⊠	No 🗌	Is	the Sample	ed Area				
Hydric Soil Present?	Yes ⊠	No 🗌	w	ithin a Wetl	and? Y	es 🛛 No 🛭]		
Wetland Hydrology Present?	Yes 🛚	No 🗌							
Remarks:									
Study Area 3									
VEGETATION – Use scientific	names of p	lants.							
		Absolute		t Indicator	Dominance Test	t worksheet:			
Tree Stratum (Plot size: 30')			Species?	Status	Number of Domir	nant Species			
1					That Are OBL, F	ACW, or FAC:	<u>l</u> (A)		
2					Total Number of	Dominant			
3 4.					Species Across A	All Strata:	<u>l</u> (B)		
4		<u>0</u>	= Total Co		Percent of Domir	nant Species			
		<u> </u>	- Total Ct	ovei	That Are OBL, F	ACW, or FAC:	100 (A/B)		
Sapling/Shrub Stratum (Plot size: 15')					Prevalence Inde	x worksheet:			
1						ver of:		_	
2					OBL species _	>	(1 =	_	
3					*		(2 =		
4 5.							(3 =		
J		0	= Total Co		FACU species _	>	(4 =	_	
Herb Stratum (Plot size: 5')		⊻	- 10101 01	JV01	UPL species _	>	(5 =	_	
Phalaris arundinacea		90	<u>Y</u>	FACW	Column Totals: _	(/	A)	_ (B)	
Ranunculus repens		10	<u>N</u>	FAC	Drovolonoo	Indox - P/A -			
3.					Prevalence	index = b/A = _			
4					Hydrophytic Ve	getation Indicato	ors:		
5					-	st for Hydrophytic	Vegetation		
6						ce Test is >50%			
7.						ce Index is ≤3.01	1 (Daniel de la company)		
8					4 - Morpholo	ogicai Adaptations emarks or on a se	s ¹ (Provide supporti parate sheet)	ing	
9 10						Non-Vascular Pla			
11.					☐ Problematic	Hydrophytic Veg	etation1 (Explain)		
		100	= Total Co	over			nd hydrology must	be	
					present, unless d	listurbed or proble	ematic.		
Woody Vine Stratum (Plot size: 15')									
1					Hydrophytic				
					Vegetation				
2					Present?	Yee 🕅	No 🗆		
		<u>0</u>	= Total Co	over	Present?	Yes ⊠	No 🗌		

SOIL Sampling Point WJSP1

Profile De	scription: (Describe Matrix	to the dep	oth needed		nent the		or confi	irm th	ne absend	ce of indicato	rs.)			
Depth	Color (moist)							_						
(inches)	10YR 2/1	<u>%</u>		moist)		Type ¹	Loc ²			_		Remark		
<u>0-2</u>		<u>100</u>												
<u>2-14</u>	10YR 4/1	<u>85</u>	10YR 5/8		<u>15</u>	<u>C</u>	<u>M</u>	<u>sa</u>	ndy loam					
		·								<u> </u>				
								_		_				
	-	. <u> </u>												
¹Type: C=0	Concentration, D=Dep	letion. RM	=Reduced	Matrix. CS	S=Covere	d or Coate	d Sand	Grain	ns.	² Location	: PL=	Pore Lini	ng, M=Ma	atrix.
	il Indicators: (Applic									ators for Prol				
☐ Histos	sol (A1)		☐ San	dy Redox	(S5)					2 cm Muck (A	10)			
	Epipedon (A2)			ped Matri						Red Parent Ma		(TF2)		
☐ Black	Histic (A3)		Loa	my Mucky	Mineral (F1) (excep	t MLRA	A 1)	□ '	Very Shallow I	Dark S	Surface (T	F12)	
	gen Sulfide (A4)		Loa	my Gleyed	l Matrix (F	⁻ 2)				Other (Explain	in Re	marks)		
	ted Below Dark Surfa	ce (A11)		leted Matr										
	Dark Surface (A12)			ox Dark S	•	,				ators of hydro		-		
-	y Mucky Mineral (S1)			leted Dark						and hydrology			nt,	
	y Gleyed Matrix (S4)		Red	ox Depres	sions (F8	i)		1	unie	ss disturbed o	r prop	iematic.		
	e Layer (if present):													
										-!! D		. .	N- 🗆	
	hes):								Hyaric S	oil Present?	T	'es ⊠	No 🗌	
Remarks:														
HYDROL	OGY													
	Hydrology Indicato	re:												
			المحطر ملمما	call that a	(د باهم					Casandanila	diaata	ro (2 or m	oro roqui	۳a d\
	Indicators (minimum o	one requ				(DO)	/			Secondary In			-	
	ace Water (A1)					aves (B9)	(except	I		☐ Water-Sta		Leaves (E	39) (MLRA	1 1, 2,
_	Water Table (A2)		_		, 2, 4A, a	nd 4B)				4A, and 4		(D.10)		
	ration (A3)] Salt Cru	, ,	. (5.46)				Drainage		. ,	(0.0)	
	er Marks (B1)			_		ates (B13)				☐ Dry-Seas				(0.0)
	ment Deposits (B2)					Odor (C1)		_	. (00)	Saturation			_	ry (C9)
	Deposits (B3)					heres alon		, Roo	ts (C3)	Geomorp			2)	
	Mat or Crust (B4)					uced Iron (,			☐ Shallow A				
	Deposits (B5)			_		ction in Til			•	☐ FAC-Neu				
	ace Soil Cracks (B6)					ed Plants (D1) (L R	RR A))	Raised A		, ,		
	dation Visible on Aeria			Other (E	xplain in	Remarks)				☐ Frost-Hea	ave Hu	ımmocks	(D7)	
	sely Vegetated Conca	ave Surface	e (B8)											
	oservations:	_	_											
Surface	Water Present?	Yes 🗌	No 🛚	Depth (i	nches): _									
Water Ta	able Present?	Yes 🗌	No 🛛	Depth (i	nches): _									
	on Present?	Yes 🛚	No 🗌	Depth (i	nches): <u>0</u>		'	Wetla	and Hydr	ology Presen	t?	Yes 🛚	No 🗌	
	s capillary fringe) e Recorded Data (stre	am gallao	monitoring	woll agri	al photos	provious i	nepoetic	one)	if availabl	lo:				
Describe	e Necolded Data (Sile	am gauge,	monitoring	y Well, aeri	ai priotos	, previous i	rispeciii	0113),	ii avaiiabi	· ·				
Domortia	··													
Remarks														
Seeps a	lign with sewer line.													
1														

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Coal Creek Trunk Upgrade	(City/Count	y: <u>Bellevue/</u>	King	Samp	Sampling Date: <u>2/28/18</u>			
Applicant/Owner: King County Wastewater Treatment Division					State: <u>WA</u>	Sampl	Sampling Point: WJSP2		
Investigator(s): Forrest Parsons, PWS/S	Suzanne Ball		Section, Township, Range: S21 T24N R5E						
Landform (hillslope, terrace, etc.): Ravin	ne	I	_ocal relief	f (concave, c	convex, none): <u>Co</u>	nvex	Slo	pe (%): <u>5</u>	
Subregion (LRR): A		Lat: <u>47</u> °	33'6.06"N		_ Long: <u>122° 9'5</u>	1.77"W	Datu	ım: <u>WGS84</u>	
Soil Map Unit Name: Alderwood and Kit	sap soils, very	steep			NWI	classification: N	lone		
Are climatic/hydrologic conditions on the	e site typical for	this time of year	ar? Yes ⊠	No □	(If no, explain	in Remarks.)			
Are Vegetation ☐, Soil ☐, or Hydrology	y 🗌 significantl	y disturbed?	Α	re "Normal (Circumstances" pr	esent? Ye	es 🛛 🛮 🗈	No 🗌	
Are Vegetation □, Soil □, or Hydrology	y 🔲 naturally p	roblematic?	(1	f needed, ex	plain any answer	s in Remarks.)			
SUMMARY OF FINDINGS – Att	ach site ma	p showing	samplin	ig point l	ocations, tran	sects, impo	rtant fe	atures, etc.	
		57							_
Hydrophytic Vegetation Present?	Yes 🗌	No ⊠	Is	the Sample	ed Area				
Hydric Soil Present?	Yes 🗌	No ⊠	w	ithin a Wetl	and? Y	′es □ No	\boxtimes		
Wetland Hydrology Present?	Yes 🗌	No 🛛							_
Remarks:									
Study Area 3									
									_
VEGETATION – Use scientific	names of p	lants.							
<u> </u>		Absolute		t Indicator	Dominance Tes	t worksheet:			
Tree Stratum (Plot size: 30')		% Cover			Number of Domi				
1. Alnus rubra			<u>Y</u>	<u>FAC</u>	That Are OBL, F	ACW, or FAC:	<u>1</u> (A)		
2					Total Number of	Dominant			
3 4					Species Across	All Strata:	<u>3</u> (B)		
4		<u>30</u>	= Total C	over	Percent of Domi				
		<u>50</u>	- 10tai 0	0101	That Are OBL, F		33 (A/B)		
Sapling/Shrub Stratum (Plot size: 15')					Prevalence Inde				
1. Rubus ursinus			<u>Y</u>	<u>FACU</u>	Total % Co	over of:	Multi	iply by:	
2					OBL species		x 1 = _		
3					FACW species				
4 5.					-	30		90	
		<u>35</u>	= Total C	over	FACU species			380	
Herb Stratum (Plot size: 5')					UPL species				
Polystichum munitum		60	<u>Y</u>	FACU	Column Totals:	125	(A) <u>4</u>	<u>170 </u>	3)
2.					Prevalence	e Index = B/A =	3.8		
3					Trevalence	TINGEX = B/A =	5.0		
4					Hydrophytic Ve	getation Indica	itors:		
5						st for Hydrophy		tion	
6					_	ce Test is >50%			
7						nce Index is ≤3.0 ogical Adaptatio	•	do oupporting	
8 9					data in R	emarks or on a	separate s	sheet)	
10.						Non-Vascular F		•	
11.					☐ Problemation	Hydrophytic Ve	egetation1	(Explain)	
		60	= Total C	over	¹ Indicators of hy			ology must be	
					present, unless	disturbed or pro	olematic.		
Woody Vine Stratum (Plot size: 15')									
1					Hydrophytic				
					Vegetation				
2.			Tatalo			Yes □	No	o 🖂	
		<u>0</u>	= Total C	over	Present?	Yes □	No	o 🛛	

SOIL Sampling Point WJSP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix			R	edox Fea	tures						
Depth	Color (moist)											
(inches)		<u>%</u>	Colo	or (moist)	%	Type ¹	Loc ²	Texture	<u>e</u>		Remark	S
<u>0-14</u>	10YR 3/2	<u>100</u>						sandy loa	am_			
¹ Type: C=C	oncentration, D=Depl	etion RM-	-Reduc	ed Matrix CS	S=Covere	d or Coated	d Sand (Grains		² I ocation: I	PI =Pore I inir	ng, M=Matrix.
	Indicators: (Applica						<u>. Cana</u>		dicator		matic Hydric	
☐ Histoso				andy Redox		,				Muck (A10)	•	
	Epipedon (A2)			tripped Matri						Parent Mate		
	Histic (A3)			oamy Mucky	` '	F1) (eycen	+ MI RA				rk Surface (T	F12)
	gen Sulfide (A4)			oamy Gleyed			t WILIYA			er (Explain in		1 12)
	ed Below Dark Surfac	re (Δ11)		epleted Matr	•	_,			Out	/ (Explain in	rtemanto)	
	Dark Surface (A12)	00 (7111)		edox Dark S		3)		3Inc	dicator	s of hydronh	ytic vegetatio	n and
	Mucky Mineral (S1)		_	epleted Dark	`	,					ust be preser	
	Gleyed Matrix (S4)			edox Depres						isturbed or p		,
	Layer (if present):		<u> </u>	odox Boproc	010110 (1 0	7		<u> </u>	111000 0	iotarboa or p	TODIOTTIALIO.	
_												
Depth (inche	es):							Hydric	c Soil F	Present?	Yes 🗌	No ⊠
Remarks:												
HYDROLO	OGY											
Wetland	Hydrology Indicator	's:										
	ndicators (minimum o		ired: ch	ack all that a	anly)				Sec	ondary Indic	eators (2 or m	ore required)
	·	TOTIC TOQUI	ircu, ciri			(DO) (·					
	ce Water (A1)			☐ Water-S			except					9) (MLRA 1, 2,
_	Water Table (A2)				, 2, 4A, a	nd 4B)				4A, and 4B)		
Satura				☐ Salt Cru						_	atterns (B10)	
	Marks (B1)			☐ Aquatic	Invertebra	ates (B13)					Water Table	, ,
☐ Sedim	ent Deposits (B2)			☐ Hydroge		(- ,				Saturation V	isible on Aer	ial Imagery (C9)
☐ Drift D	eposits (B3)			Oxidized	d Rhizosp	heres along	g Living	Roots (C3)		Geomorphic	Position (D2	2)
☐ Algal I	Mat or Crust (B4)			Presence	e of Redu	uced Iron (C	C4)			Shallow Aqu	uitard (D3)	
☐ Iron D	eposits (B5)			Recent	Iron Redu	ction in Till	ed Soils	s (C6)		FAC-Neutra		
	ce Soil Cracks (B6)			☐ Stunted							Mounds (D6)	(LRR A)
	ation Visible on Aeria	l Imagery (B7)	Other (E			, (,			Hummocks	,
	ely Vegetated Conca	• •										(= .)
	servations:	ve Gunace	(00)									
				1								
	Vater Present?	Yes □	No ⊠									
Water Tal	ble Present?	Yes 🗌	No ⊠	Depth (i	nches): _							
	n Present?	Yes 🗌	No 🗵	Depth (i	nches): _		\	Wetland Hy	/drolog	y Present?	Yes 🗌	No 🖂
	capillary fringe)											
Describe	Recorded Data (stream	am gauge,	monitor	ing well, aeri	al photos	, previous i	nspectio	ons), if availa	able:			
Remarks:												

ATTACHMENT 3 WETLAND RATING FORMS

	Critical Areas Memorandum	– Maintenance Hole 25B Protection May 12, 2020
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Jacobs Engineering Group Inc.		

RATING SUMMARY – Western Washington

Name of wetland (or ID #):	Wetland A/1		Date of site visit:	4/17/2019
Rated by R. Whitson, B. O'	neill	Trained by Ecology? ☑ Yes ☐ No	Date of training	Mar-15
HGM Class used for rating	Depressional & Flats	Wetland has multip	ole HGM classes? ☑	Yes □ No
	<u>-</u>	the figures requested (figures can paper City of Bellevue Orthophotograp	•	
OVERALL WETLAND CA	TEGORY III	(based on functions ☑ or speci	al characteristics)
1. Category of wetland	based on FUNCTION	ONS		
	Category I - Total so	ore = 23 - 27	Score for each	
	Category II - Total score = 20 - 22			
X	X Category III - Total score = 16 - 19			
	Category IV - Total s	score = 9 - 15	ratings	
			Lordor of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat				
List appropriate rating (H, M, L)							
Site Potential	M	L	L				
Landscape Potential	Н	М	L				
Value	Н	М	Н	Total			
Score Based on Ratings	8	5	5	18			

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	2
Map of the contributing basin	D 4.3, D 5.3	3
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	4
polygons for accessible habitat and undisturbed habitat		4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	6

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

For questions 1 -7, the criteria described must apply to the entire unit being rated. If hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1 - 7 apply, and go to Question 8.

1. Are th	. Are the water levels in the entire unit usually controlled by tides except during floods?		
V	NO - go to 2	☐ YES - the wetland class is Tidal Fringe - go to 1.1	
1.1	Is the salinity of the water during per	ods of annual low flow below 0.5 ppt (parts per thousand)?	
		Freshwater Tidal Fringe use the forms for Riverine wetlands. If tuarine wetland and is not scored. This method cannot be	
	ntire wetland unit is flat and precipitati vater and surface water runoff are NO	on is the only source (>90%) of water to it. I sources of water to the unit.	
✓	NO - go to 3 If your wetland can be classified as a	☐ YES - The wetland class is Flats Flats wetland, use the form for Depressional wetlands.	
	·	on the shores of a body of permanent open water (without any ne year) at least 20 ac (8 ha) in size;	
V	NO - go to 4	□ YES - The wetland class is Lake Fringe (Lacustrine Fringe)	
	may flow subsurface, as sheetflow, or	be very gradual), in one direction (unidirectional) and usually comes from seeps. It r in a swale without distinct banks.	
V	NO - go to 5	☐ YES - The wetland class is Slope	
	•	/pe of wetlands except occasionally in very small and shallow s are usually <3 ft diameter and less than 1 ft deep).	
5. Does t	the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at leas	nnel, where it gets inundated by overbank flooding	
✓	NO - go to 6	☐ YES - The wetland class is Riverine	
NOTE: T	he Riverine unit can contain depressi	ons that are filled with water when the river is not flooding.	

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturate	ed to the surface, at
some time during the year? This means that any outlet, if present, is higher than the interio	r of the wetland.

☑ NO - go to 7	☐ YES - The wetland class is Depressional

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

	☐ YES - The wetland class is Depressional
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8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

NOTES and FIELD OBSERVATIONS:

Wetland A/1 contains both slope and depressional hydrogeomorphic classes.

DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression (QUESTION 7 on key)		
with no surface water leaving it (no outlet).	points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly	mainta 0	4
constricted permanently flowing outlet.	points = 2	1
 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing 	points = 1	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic	·	0
(use NRCS definitions).	Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-sh	rub, and/or	
Forested Cowardin classes):		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	5
Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area	points = 3	5
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area	points = 1	
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description	in manual.	
Area seasonally ponded is $> \frac{1}{2}$ total area of wetland	points = 4	2
Area seasonally ponded is > 1/4 total area of wetland	points = 2	
Area seasonally ponded is < 1/4 total area of wetland	points = 0	
· · · · · · · · · · · · · · · · · · ·	in the boxes above	8
Rating of Site Potential If score is: \Box 12 - 16 = H \Box 6 - 11 = M \Box 0 - 5 = L	Record the rating on	the first page
D 2.0. Does the landscape have the potential to support the water quality functi	on of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that		4
generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are		
not listed in questions D 2.1 - D 2.3?		1
Source Active dog use	Yes = 1 No = 0	
·	in the boxes above	3
Rating of Landscape Potential If score is: \square 3 or 4 = H \square 1 or 2 = M \square 0 = L	Record the rating on	the first page
D 3.0. Is the water quality improvement provided by the site valuable to society	?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,		1
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	ı
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the	` '	1
	Yes = 1 No = 0	
D 3.3. Has the site been identified in a watershed or local plan as important for		_
maintaining water quality (answer YES if there is a TMDL for the basin in		2
which the unit is found)?	Yes = 2 No = 0	
·	in the boxes above	4
Rating of Value If score is: \square 2 - 4 = H \square 1 = M \square 0 = L	Record the rating on	the first page

D 4.0. Does the site have the potential to reduce flooding and erosion? D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression of flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet Wetland has an intermittently flowing outlet Wetland has an intermittently flowing outlet Wetland has an unconstricted, or slightly constricted permanently flowing outlet Wetland has an unconstricted, or slightly constricted, surface outlet hat is permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet hat is permanently flowing by the bottom of the outlet. For wetlands with no outlet, measure from the surface or bottom of outlet points = 0 D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface or bottom of outlet points = 7 Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 5 Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 3 ft from surface or bottom of outlet points = 3 The wetland is a fheadwater' wetland Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the water points = 5 The area of the basin is 10 to 100 times the area of the unit points = 5 The area of the basin is more than 100 times the area of the unit points = 0 D 5.0. Does the landscape have the potential to support hydrologic function of the site? D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 The read of the basin is more than 100 times the area of the unit points = 0 D 5.3. Is more than 25%	DEPRESSIONAL AND FLATS WETLANDS		
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Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing D1.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface or bottom of outlet points = 0 D4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water points = 3 Wetland is flat but has small depressions on the surface that trap water points = 0 D4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of wetland unit itself. The area of the basin is loss than 10 times the area of the unit points = 0 The area of the basin is 10 to 100 times the area of the unit points = 0 Entire wetland is in the Flats class The area of the basin is 10 to 100 times the area of the unit points = 0 Entire wetland is in the Flats class Total for D4 Add the points in the boxes above Rating of Site Potential If score is: T12-16 H 6-11 sM 70-5 sL Record the rating on the first page D5.0. Does the landscape have the potential to support hydrologic function of the site? D5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 Total for D5 Add the points in the boxes above D6.0. Are the hydrologic functions provided by the site valuable to society? D6.1. The unit is in a landscape that has flooding	D 4.0. Does the site have the potential to reduce flooding and erosion?		
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Marks of ponding are 3 ft or more above the surface or bottom of outlet			
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6

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 0 □ Emergent 3 structures: points = 2☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 ☐ Occasionally flooded or inundated 2 types present: points = 1 ☑ Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 **None** = 0 points Low = 1 point**Moderate** = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:			
Check the habitat features that are present in the wetland. The number of checks is the number of			
points.			
 ✓ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland 			
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends			
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at			
least 33 ft (10 m)	1		
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning			
(> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees			
that have not yet weathered where wood is exposed)			
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas			
that are permanently or seasonally inundated (structures for egg-laying by amphibians)			
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see			
H 1.1 for list of strata)			
Total for H 1 Add the points in the boxes above	the first need		
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating on	the first page		
H 2.0. Does the landscape have the potential to support the habitat function of the site?			
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).			
Calculate:			
0 % undisturbed habitat + (12 % moderate & low intensity land uses / 2) = 6%			
If total accessible habitat is:	0		
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3			
20 - 33% of 1 km Polygon points = 2			
10 - 19% of 1 km Polygon points = 1			
< 10 % of 1 km Polygon points = 0			
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.			
Calculate:			
0 % undisturbed habitat + (31 % moderate & low intensity land uses / 2) = 15.5%			
Undicturbed behitet > 50% of Delvaen	1		
Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2			
Undisturbed habitat 10 - 50% and > 3 patches points = 1			
Undisturbed habitat < 10% of 1 km Polygon points = 0			
H 2.3 Land use intensity in 1 km Polygon: If			
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2		
≤ 50% of 1km Polygon is high intensity points = 0			
Total for H 2 Add the points in the boxes above	-1		
Rating of Landscape Potential If Score is: 4-6=H 1-3=M <<1=L Record the rating on	the first page		
H 3.0. Is the habitat provided by the site valuable to society? H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>			
only the highest score that applies to the wetland being rated.			
Site meets ANY of the following criteria: points = 2			
☑ It has 3 or more priority habitats within 100 m (see next page)			
☐ It provides habitat for Threatened or Endangered species (any plant			
or animal on the state or federal lists)			
☐ It is mapped as a location for an individual WDFW priority species	2		
□ It is a Wetland of High Conservation Value as determined by the	4		
Department of Natural Resources			
☐ It has been categorized as an important habitat site in a local or			
regional comprehensive plan, in a Shoreline Master Plan, or in a			
watershed plan Site has 1 or 2 priority habitate (listed on poyt page) with in 100m			
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0			
Rating of Value If Score is: \bigcirc 2 = H \bigcirc 1 = M \bigcirc 0 = L Record the rating on	the first page		
<u> </u>	,		

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WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
V	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158 – see web link above</i>).
V	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
V	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report</i> – see web link on previous page).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Criteck off any criteria that apply to the wetland. List the category when the appropriate criteria are met. SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal. Vegetated, and With a salinity greater than 0.5 ppt Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under VNAC 323-30-1617 Asserting than 1.5 ppt 1.5 p	Wetland	Туре	Category
SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt Yes - Co to SC 1.1	Chock of	f any critoria that apply to the wetland. List the category when the appropriate critoria are mot	
Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt Yes - Go to SC 1.1 No = Not an estuarine wetland SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-1517 Reserve designated under WAC 332-30-1517 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are Spazina, see page 25) At least 3x of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Reserved their wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/hhp/refdesk/datasearch/whp.wetlands.pdf SC 2.4. Has WDNR identified the wetland within the ST/R as a Wetland of High Conservation Value and listed in on their website? Pes - Contact WNHP/WDNR and to SC 2.4. No = Not WHCV SC 2.4. Has WDNR identified the wetland within the ST/R as a Wetland of High Conservation value and listed in on their website? Pes - Cot SC 3.3. No = So Not WHCV SC 3.0. Bogs Does the wetland (or any part of the unit) meet both th		• • • • • • • • • • • • • • • • • • • •	
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NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?			
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the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?		, , , , , , , , , , , , , , , , , , ,	
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?			
western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	SC 3.4	· · · · · · · · · · · · · · · · · · ·	
spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	0.1.		
in Table 4 provide more than 30% of the cover under the canopy?			
· · · · · · · · · · · · · · · · · · ·			
		☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.	0.	Forested Wetlands	
	-	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
		criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
		answer YES you will still need to rate the wetland based on its functions.	
[Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
·	_	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
		(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
		(dbh) of 32 in (81 cm) or more.	
1		Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200	
'		years old OR the species that make up the canopy have an average diameter (dbh)	
		exceeding 21 in (53 cm).	
		exceeding 21 in (ee arry).	
		☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5	0. \	Wetlands in Coastal Lagoons	
00 0.	٠.	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
1		The wetland lies in a depression adjacent to marine waters that is wholly or partially	
·		separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
		rocks	
[The lagoon in which the wetland is located contains ponded water that is saline or	
		brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
		be measured near the bottom)	
		☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
SC 5.	1.	Does the wetland meet all of the following three conditions?	
		The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing),	
		and has less than 20% cover of aggressive, opportunistic plant species (see list of	
		species on p. 100).	
[At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
		grazed or un-mowed grassland.	
[The wetland is larger than ¹ / ₁₀ ac (4350 ft ²)	
		☐ Yes = Category I ☐ No = Category II	
SC 6.0. Interdunal Wetlands			
		Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
		Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
		based on its habitat functions.	
		In practical terms that means the following geographic areas:	
[Long Beach Peninsula: Lands west of SR 103	
[Grayland-Westport: Lands west of SR 105	
[Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
		☐ Yes - Go to SC 6.1 ☑ No = Not an interdunal wetland for rating	
SC 6.	1.	Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form	
		(rates H,H,H or H,H,M for the three aspects of function)?	
		☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.	2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
		☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.	3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and	
		1 ac?	
		□ Yes = Category III □ No = Category IV	
Category of wetland based on Special Characteristics			
If you answered No for all types, enter "Not Applicable" on Summary Form			

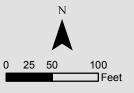


Legend

Palustrine Scrub-Shrub

Other Project Wetlands

Stream Centerlines (Approximate)



2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: A/1

Figure 1. Vegetation Map Questions: D1.3, H1.1, H1.4





Wetland Rating System

150 ∃Feet

Coal Creek Sewer Trunk Upgrade Wetland: A/1

Figure 2. Hydroperiods, Outlet, and 150-foot Boundary Map Questions: D1.1, D1.4, D2.2, D4.1, D5.2, H1.2

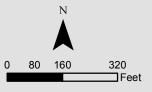


Legend

Contributing Basin

Project Wetlands

City of Bellevue Drainage Basin



2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: A/1

Figure 3. Contributing Basin Questions: D4.3, D5.3







Low and Moderate (12% accessible; 31% total)



High (69% total)



Accessible



0.125 0.25 0.5 Kilometers

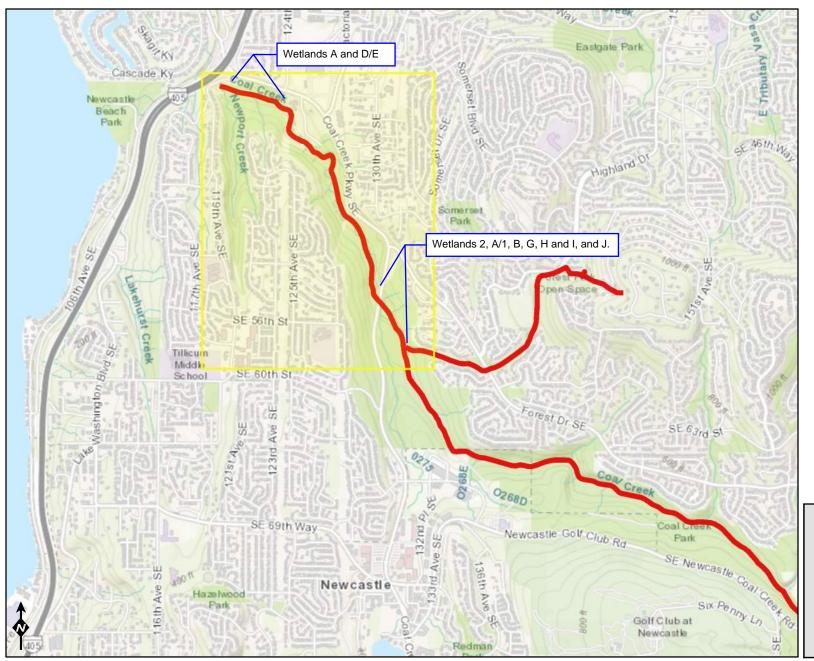
2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: A/1

Figure 4. 1 KM Polygon Questions: H2.1, H2.2, H2.3



Water Quality - 303d



Assessed Waters/Sediment

Water

Category 5 - 303d

Category 4C

🤎 Category 4B

Category 4A

Category 2

Category 1

Sediment

Category 5 - 303d

ZZZ Category 4C

ZZZ Category 4B

ZZZ Category 4A

Category 2

ZZZ Category 1

2014 Updated Washington State
Wetland Rating System
Coal Creek Sewer Trunk Upgrade
Wetland: ALL

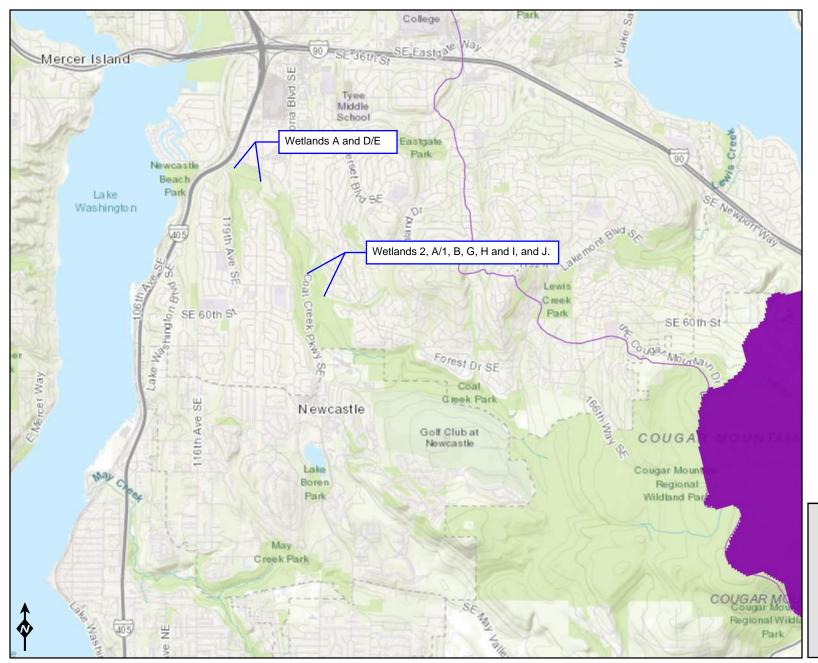
Figure 5. Water Quality - 303d (Figure 4. for Wetland J) Questions: D3.1, D3.2







Water Quality - TMDL



WQ Improvement Projects

- Approved
- In Development
- Sub-Watershed (12 digit HUC)

While there is no Ecology TMDL project ongoing for Coal Creek, the 1987 Coal Creek Basin Plan discusses water quality and sediment loading within Coal Creek. There are also several active sediment ponds within and nearby the project area along Coal Creek.

2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: ALL

Figure 6. Water Quality - TMDL (Figure 5. for Wetland J) Questions: D3.1, D3.2







RATING SUMMARY – Western Washington

Name of wetland (or ID #):	Wetland B		Date of site visit: 4/17/2019
Rated by R. Whitson, B. O'r	neill	Trained by Ecology? ☑ Yes ☐ No	Date of training Mar-15
HGM Class used for rating	Depressional & Flats	Wetland has multip	le HGM classes? ☑ Yes ☐ No
	-	the figures requested (figures car ap City of Bellevue Orthophotograp	·
OVERALL WETLAND CA	TEGORY II	(based on functions ☑ or speci	al characteristics □)
1. Category of wetland	l based on FUNCTIC	DNS	
	Category I - Total sco	ore = 23 - 27	Score for each
X Category II - Total score = 20 - 22		function based	
	Category III - Total s	core = 16 - 19	on three
	Category IV - Total s	core = 9 - 15	ratings

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	M	L	М	
Landscape Potential	Н	Н	L	
Value	Н	M	Н	Total
Score Based on Ratings	8	6	6	20

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	2
Map of the contributing basin	D 4.3, D 5.3	3
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	4
polygons for accessible habitat and undisturbed habitat		4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	6

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

For questions 1 -7, the criteria described must apply to the entire unit being rated. If hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1 - 7 apply, and go to Question 8.

1. Are th	ne water levels in the entire unit usuall	y controlled by tides except during floods?
V	NO - go to 2	☐ YES - the wetland class is Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during peri	ods of annual low flow below 0.5 ppt (parts per thousand)?
	If your wetland can be classified as a	Freshwater Tidal Fringe use the forms for Riverine wetlands. If stuarine wetland and is not scored. This method cannot be
	ntire wetland unit is flat and precipitation vater and surface water runoff are NO	on is the only source (>90%) of water to it. Γ sources of water to the unit.
V	NO - go to 3 If your wetland can be classified as a	☐ YES - The wetland class is Flats Flats wetland, use the form for Depressional wetlands.
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of t At least 30% of the open water area	on the shores of a body of permanent open water (without any ne year) at least 20 ac (8 ha) in size;
✓	NO - go to 4	□ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
	may flow subsurface, as sheetflow, o	be very gradual), in one direction (unidirectional) and usually comes from seeps. It in a swale without distinct banks.
V	NO - go to 5	☐ YES - The wetland class is Slope
	·	ype of wetlands except occasionally in very small and shallow s are usually <3 ft diameter and less than 1 ft deep).
5. Does t	from that stream or river,	nnel, where it gets inundated by overbank flooding
V	NO - go to 6	☐ YES - The wetland class is Riverine
NOTE: T	he Riverine unit can contain depression	ons that are filled with water when the river is not flooding.

Wetland name or number	R	
Wenand hame of humber		

Is the entire wetland unit in a topographic dep	oression in which	water ponds, or is	s saturated to the	surface, at
some time during the year? This means that any	y outlet, if present	t, is higher than th	ne interior of the w	etland.

☑ NO - go to 7	☐ YES - The wetland class is Depressional

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☑ NO - go to 8

☐ YES - The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

NOTES and FIELD OBSERVATIONS:

The wetland is depressional and riverine along the stream boundaries.

DEPRESSIONAL AND FLATS WETLANDS			
Water Quality Functions - Indicators that the site functions to improve water quality			
D 1.0. Does the site have the potential to improve water quality?			
D 1.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression (QUESTION 7 on key)			
with no surface water leaving it (no outlet).	points = 3		
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	points = 2	1	
☐ Wetland has an unconstricted, or slightly constricted, surface outlet	pointo – 2	•	
that is permanently flowing	points = 1		
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a			
permanently flowing ditch.	points = 1		
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic		0	
(use NRCS definitions).	Yes = 4 No = 0		
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shirested Cowardin classes):	rub, and/or		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5		
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	3	
Wetland has persistent, ungrazed plants > 1/10 of area	points = 1		
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0		
D 1.4. Characteristics of seasonal ponding or inundation:			
This is the area that is ponded for at least 2 months. See description	in manual.		
Area seasonally ponded is $> \frac{1}{2}$ total area of wetland	points = 4	2	
Area seasonally ponded is > 1/4 total area of wetland	points = 2		
Area seasonally ponded is < 1/4 total area of wetland	points = 0		
	in the boxes above	6	
Rating of Site Potential If score is: \Box 12 - 16 = H \Box 6 - 11 = M \Box 0 - 5 = L	Record the rating on	the first page	
D 2.0. Does the landscape have the potential to support the water quality function	on of the site?		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that		4	
generate pollutants?	Yes = 1 No = 0	1	
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0	
D 2.4. Are there other sources of pollutants coming into the wetland that are			
not listed in questions D 2.1 - D 2.3?	Vac 4 No 0	1	
Source Dogs off-leash Total for D 2 Add the points	Yes = 1 No = 0 in the boxes above	3	
Rating of Landscape Potential If score is: \square 3 or 4 = H \square 1 or 2 = M \square 0 = L			
	. riocora uno raung on	uro mot pago	
D 3.0. Is the water quality improvement provided by the site valuable to society?	?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,		1	
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0		
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the	* *	1	
D 2 2 Lleg the cite has identified in a watershed as leading as increased as	Yes = 1 No = 0		
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in		2	
which the unit is found)?	Yes = 2 No = 0	_	
, , , , , , , , , , , , , , , , , , ,	in the boxes above	4	
Rating of Value If score is: ☑ 2 - 4 = H □ 1 = M □ 0 = L	Record the rating on		

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation D 4.0. Does the site have the potential to reduce flooding and erosion? D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface or bottom of outlet points = 7 Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. □ The area of the basin is less than 10 times the area of the unit points = 3 The area of the basin is nore than 100 times the area of the unit points = 5 The area of the basin is more than 100 times the area of the unit points = 5 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class O 4 All the Detail of the first page D 5.0. Does the landscape have the potential to support hydrologic function of the site?
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 1 Marks of ponding less than 0.5 ft (6 in) D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is nore than 100 times the area of the unit points = 5 The area of the basin is more than 100 times the area of the unit points = 5 The area of the basin is nore than 100 times the area of the unit points = 5 Entire wetland is in the Flats class Total for D 4 Add the points in the boxes above 0 Rating of Site Potential If score is: □ 12 - 16 = H □ 6 - 11 = M □ 0 - 5 = L Record the rating on the first page
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D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 1
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human
land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?
Yes = 1 No = 0
Total for D 5 Add the points in the boxes above 3
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best
matches conditions around the wetland unit being rated. Do not add points. Choose the highest
score if more than one condition is met.
The wetland captures surface water that would otherwise flow down-gradient into areas
where flooding has damaged human or natural resources (e.g., houses or salmon redds):
Flooding occurs in a sub-basin that is immediately down-
gradient of unit. points = 2
 Surface flooding problems are in a sub-basin farther down-
gradient. points = 1
☐ Flooding from groundwater is an issue in the sub-basin. points = 1
☐ The existing or potential outflow from the wetland is so constrained
by human or natural conditions that the water stored by the wetland
cannot reach areas that flood. Explain why points = 0
☐ There are no problems with flooding downstream of the wetland. points = 0
D 6.2. Has the site been identified as important for flood storage or flood
conveyance in a regional flood control plan? Yes = 2 No = 0 Add the points in the beyon above 1
Total for D 6 Add the points in the boxes above 1 Rating of Value If score is: □ 2 - 4 = H ☑ 1 = M □ 0 = L Record the rating on the first page

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 2 □ Emergent 3 structures: points = 2☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☑ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 2 ☐ Occasionally flooded or inundated 2 types present: points = 1 ☑ Saturated only 1 types present: points = 0 ☑ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 2 **None** = 0 points Low = 1 point**Moderate** = 2 points All three diagrams in this row are **HIGH** = 3 points

7

H 1.5. Special habitat features:	of l
Check the habitat features that are present in the wetland. <i>The number of checks is the number points.</i>	OI
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☑ Standing snags (dbh > 4 in) within the wetland	
☑ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	
least 33 ft (10 m)	4
 Stable steep banks of fine material that might be used by beaver or muskrat for dennin (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees 	~
that have not yet weathered where wood is exposed)	
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in area	s
that are permanently or seasonally inundated (structures for egg-laying by amphibians)
☑ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see	,
H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes abo	
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating	on the first page
H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate:	
0 % undisturbed habitat + (13 % moderate & low intensity land uses / 2) = 6.5%	1
If total accessible habitat is:	0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points =	
20 - 33% of 1 km Polygon points =	
10 - 19% of 1 km Polygon points = < 10 % of 1 km Polygon points =	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	. 0
Calculate:	
0 % undisturbed habitat + (31 % moderate & low intensity land uses / 2) = 15.5	%
	1
Undisturbed habitat > 50% of Polygon points =	
Undisturbed habitat 10 - 50% and in 1-3 patches points = Undisturbed habitat 10 - 50% and > 3 patches points =	
Undisturbed habitat < 10% of 1 km Polygon points =	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-	-2)
≤ 50% of 1km Polygon is high intensity points =	: 0
Total for H 2 Add the points in the boxes abo	
Rating of Landscape Potential If Score is: 4-6=H 1-3=M <	on the first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points =	: 2
☑ It has 3 or more priority habitats within 100 m (see next page)	
 It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) 	
☐ It is mapped as a location for an individual WDFW priority species	
☐ It is mapped as a location for an individual WDF W phonty species ☐ It is a Wetland of High Conservation Value as determined by the	2
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points =	
Site does not meet any of the criteria above points = Rating of Value If Score is: $\ \ \ \ \ \ \ \ \ \ \ \ \ $	on the first page

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
V	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158 – see web link above</i>).
V	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
V	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
▽	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Type	Category
Check off	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
SC 1.1.	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	□ Yes = Category I □ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	
	□ Yes = Category I □ No = Category II	
SC 2.0. V	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of	
	Wetlands of High Conservation Value?	
SC 2.2.	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.		
00 2.0.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website?	
	□ Yes = Category I □ No = Not WHCV	
SC 3.0. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions .	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
00 0	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
00.00	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE: If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 20% of the sover under the capacity?	
	in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200	
	years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing),	
	and has less than 20% cover of aggressive, opportunistic plant species (see list of	
	species on p. 100).	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
_	grazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
00.64	☐ Yes - Go to SC 6.1 ☑ No = Not an interdunal wetland for rating	
SC 6.1.	Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form	
	(rates H,H,H or H,H,M for the three aspects of function)?	
00 6 0	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.	5 /	
00 6 3	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
	□ Yes = Category III □ No = Category IV	
Catago	ry of wetland based on Special Characteristics	
_	nswered No for all types enter "Not Applicable" on Summary Form	



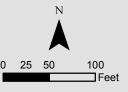
Legend

Palustrine Scrub-Shrub

Palustrine Forested

Other Project Wetlands

Stream Centerlines (Approximate)



2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: B

Figure 1. Vegetation Map Questions: D1.3, H1.1, H1.4





2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade

150 □Feet

Coal Creek Sewer Trunk Upgrade Wetland: B

Figure 2. Hydroperiods, Outlet, and 150-foot Boundary Map Questions: D1.1, D1.4, D2.2, D4.1, D5.2, H1.2

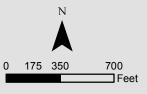


Legend

Contributing Basin

Project Wetlands

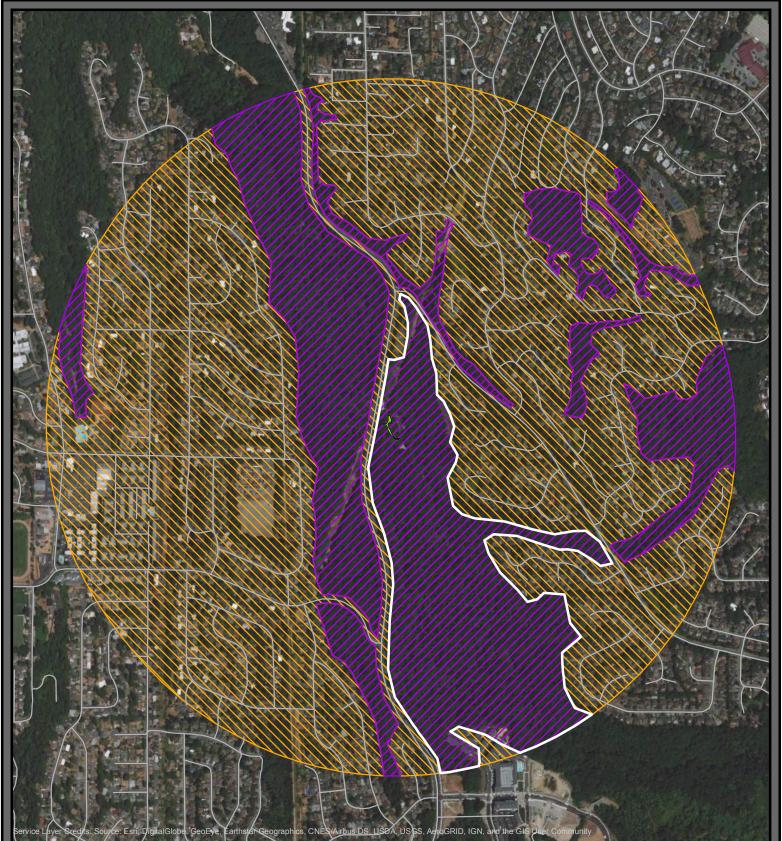
City of Bellevue Drainage Basin

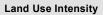


2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: B

Figure 3. Contributing Basin Questions: D4.3, D5.3







 \square

Low and Moderate (13% accessible; 31% total)



High (69% total)



Accessible



0.125 0.25 0.5 Kilometers

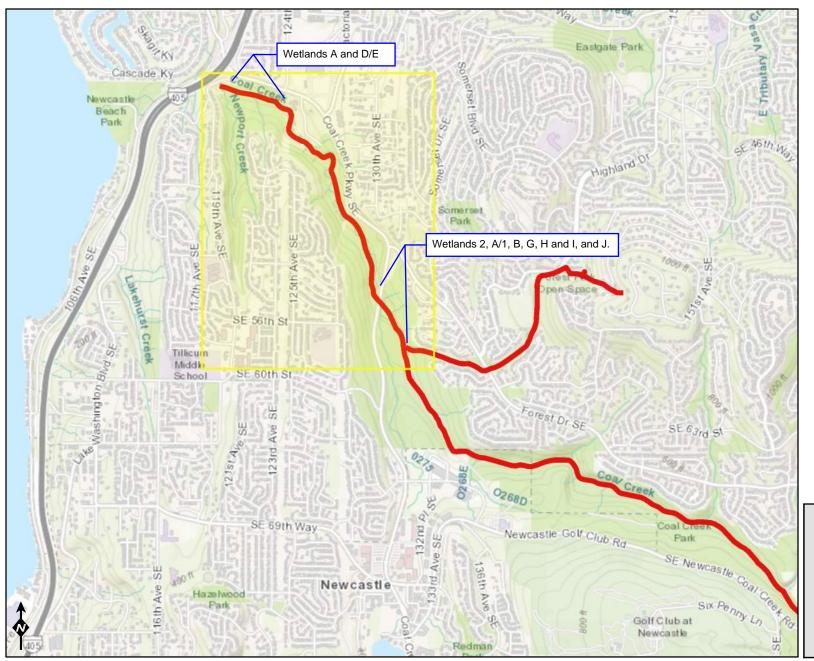
2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: B

Figure 4. 1 KM Polygon Questions: H2.1, H2.2, H2.3



Water Quality - 303d



Assessed Waters/Sediment

Water

Category 5 - 303d

Category 4C

🤎 Category 4B

Category 4A

Category 2

Category 1

Sediment

Category 5 - 303d

ZZZ Category 4C

ZZZ Category 4B

ZZZ Category 4A

Category 2

ZZZ Category 1

2014 Updated Washington State
Wetland Rating System
Coal Creek Sewer Trunk Upgrade
Wetland: ALL

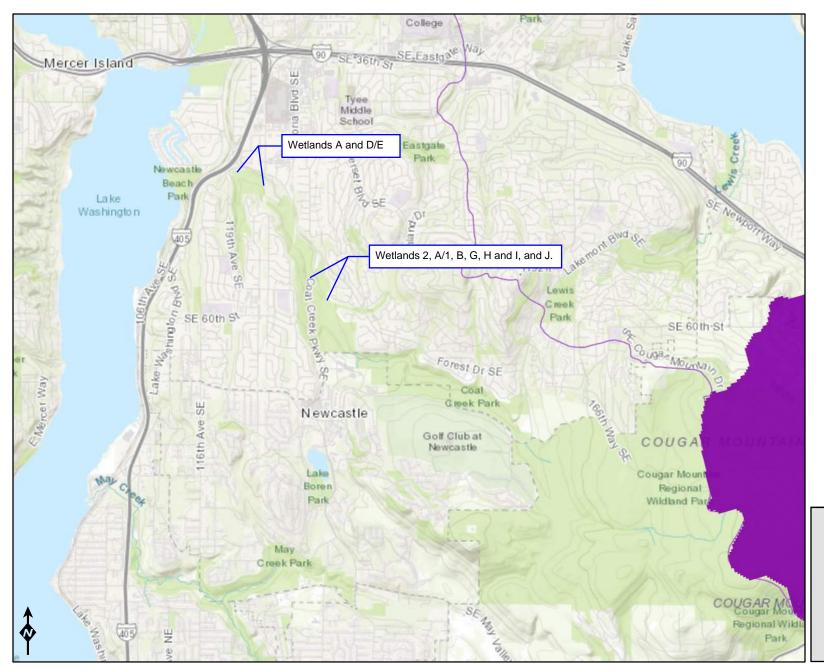
Figure 5. Water Quality - 303d (Figure 4. for Wetland J) Questions: D3.1, D3.2







Water Quality - TMDL



WQ Improvement Projects

- Approved
- In Development
- Sub-Watershed (12 digit HUC)

While there is no Ecology TMDL project ongoing for Coal Creek, the 1987 Coal Creek Basin Plan discusses water quality and sediment loading within Coal Creek. There are also several active sediment ponds within and nearby the project area along Coal Creek.

2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: ALL

Figure 6. Water Quality - TMDL (Figure 5. for Wetland J) Questions: D3.1, D3.2







RATING SUMMARY – Western Washington

Name of wetland (or ID #):	Wetland G			Date of site visit:	4/18/2019
Rated by R. Whitson, B. O'	neill	Trained by Eco	logy? ☑ Yes □ No	Date of training	Mar-15
HGM Class used for rating	Depressional & Fla	ats	Wetland has multipl	e HGM classes? □	Yes ☑ No
	ot complete with o	•	` •	•	
OVERALL WETLAND CA	TEGORYII	I (based on fu	nctions ☑ or specia	al characteristics)
1. Category of wetland	d based on FUNC	TIONS			
	Category I - Total	score = 23 - 27		Score for each	
		l score = 20 - 22		function based	
X	Category III - Tota	al score = 16 - 19		on three	
	Category IV - Tota	al score = 9 - 15		ratings	
				(order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	List appropriate rating (H, M, L)		
Site Potential	M	M	L	
Landscape Potential	M	L	L	
Value	Н	M	Н	Total
Score Based on Ratings	7	5	5	17

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	2
Map of the contributing basin	D 4.3, D 5.3	3
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	4
polygons for accessible habitat and undisturbed habitat		4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	6

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

For questions 1 -7, the criteria described must apply to the entire unit being rated. If hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1 - 7 apply, and go to Question 8.

1. Are th	e water levels in the entire unit usual	controlled by tides except during floods?
V	NO - go to 2	☐ YES - the wetland class is Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during per	ods of annual low flow below 0.5 ppt (parts per thousand)?
	=	Freshwater Tidal Fringe use the forms for Riverine wetlands. If tuarine wetland and is not scored. This method cannot be
	ntire wetland unit is flat and precipitati rater and surface water runoff are NO	on is the only source (>90%) of water to it. T sources of water to the unit.
~	NO - go to 3 If your wetland can be classified as a	☐ YES - The wetland class is Flats Flats wetland, use the form for Depressional wetlands.
	he entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of the At least 30% of the open water area	on the shores of a body of permanent open water (without any ne year) at least 20 ac (8 ha) in size;
V	NO - go to 4	□ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
	he entire wetland unit meet all of the The wetland is on a slope (<i>slope car</i>). The water flows through the wetland may flow subsurface, as sheetflow, on the water leaves the wetland witho .	be very gradual), in one direction (unidirectional) and usually comes from seeps. It r in a swale without distinct banks.
V	NO - go to 5	☐ YES - The wetland class is Slope
		/pe of wetlands except occasionally in very small and shallow s are usually <3 ft diameter and less than 1 ft deep).
	he entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at least	nnel, where it gets inundated by overbank flooding
V	NO - go to 6	☐ YES - The wetland class is Riverine
NOTE: T	he Riverine unit can contain denressi	ons that are filled with water when the river is not flooding

Wetland	name or	number	G
vvenana	Hallic O	HUHHU	()

6.	Is the entire	wetland	unit in a	topographic	depression	in which	water ponds,	, or is saturated	d to the surface	∍, at
so	me time dur	ing the ye	ear? <i>Thi</i> s	s means that	any outlet,	if presen	t, is higher th	an the interior	of the wetland.	

□ NO - go to 7	YES - The wetland class is Depressional

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☑ NO - go to 8

☐ YES - The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS			
Water Quality Functions - Indicators that the site functions to in	nprove water quality		
D 1.0. Does the site have the potential to improve water quality?			
D 1.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression (QUESTION 7 on key)			
with no surface water leaving it (no outlet).	points = 3		
Wetland has an intermittently flowing stream or ditch, OR highly			
constricted permanently flowing outlet.	points = 2	3	
 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing 	points = 1		
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a	•		
permanently flowing ditch.	points = 1		
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic		0	
(use NRCS definitions).	Yes = 4 No = 0	U	
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-sh	rub, and/or		
Forested Cowardin classes):			
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	1	
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	'	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area	points = 1		
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0		
D 1.4. Characteristics of seasonal ponding or inundation:			
This is the area that is ponded for at least 2 months. See description	in manual.		
Area seasonally ponded is > ½ total area of wetland	points = 4	4	
Area seasonally ponded is > 1/4 total area of wetland	points = 2		
Area seasonally ponded is < 1/4 total area of wetland	points = 0		
	in the boxes above		
Rating of Site Potential If score is: \Box 12 - 16 = H \Box 6 - 11 = M \Box 0 - 5 = L	Record the rating on	the first page	
D 2.0. Does the landscape have the potential to support the water quality function	ion of the site?		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that		0	
generate pollutants?	Yes = 1 No = 0	0	
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0	
D 2.4. Are there other sources of pollutants coming into the wetland that are			
not listed in questions D 2.1 - D 2.3?		1	
Source <u>dogs off-leash</u>	Yes = 1 No = 0		
·	in the boxes above		
Rating of Landscape Potential If score is: \square 3 or 4 = H \square 1 or 2 = M \square 0 = I	Record the rating on	the first page	
D 3.0. Is the water quality improvement provided by the site valuable to society	?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,		1	
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0		
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the	` '	1	
	Yes = 1 No = 0	-	
D 3.3. Has the site been identified in a watershed or local plan as important for		_	
maintaining water quality (answer YES if there is a TMDL for the basin in		2	
which the unit is found)?	Yes = 2 No = 0		
·	in the boxes above	4	
Rating of Value If score is:	Record the rating on	tne first page	

DEPRESSIONAL AND FLATS WETLANDS				
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation				
D 4.0. Does the site have the potential to reduce flooding and erosion?				
D 4.1. Characteristics of surface water outflows from the wetland:				
Wetland is a depression or flat depression with no surface water				
leaving it (no outlet) points = 4				
Wetland has an intermittently flowing stream or ditch, OR highly				
constricted permanently flowing outlet points = 2	4			
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a				
permanently flowing ditch points = 1				
Wetland has an unconstricted, or slightly constricted, surface outlet				
that is permanently flowing points = 0				
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of				
the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the				
deepest part.				
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7	2			
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5	3			
☐ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3				
☐ The wetland is a "headwater" wetland points = 3				
Wetland is flat but has small depressions on the surface that trap water points = 1				
Marks of ponding less than 0.5 ft (6 in) points = 0				
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.				
☐ The area of the basin is less than 10 times the area of the unit points = 5				
The area of the basin is 10 to 100 times the area of the unit points = 3	3			
The area of the basin is more than 100 times the area of the unit points = 0				
☐ Entire wetland is in the Flats class points = 5				
Total for D 4 Add the points in the boxes above	10			
Rating of Site Potential If score is: \Box 12 - 16 = H \Box 6 - 11 = M \Box 0 - 5 = L Record the rating on				
D 5.0. Does the landscape have the potential to support hydrologic function of the site?	mot page			
	0			
D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff?				
Yes = 1 No = 0	0			
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human				
land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	0			
Yes = 1 No = 0	· ·			
Total for D 5 Add the points in the boxes above	0			
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on	the first page			
D 6.0. Are the hydrologic functions provided by the site valuable to society?				
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best				
matches conditions around the wetland unit being rated. Do not add points. Choose the highest				
score if more than one condition is met				
Score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas.				
The wetland captures surface water that would otherwise flow down-gradient into areas				
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):				
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-				
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2	1			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-	1			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1	1			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 ■ Surface flooding problems are in a sub-basin farther down-gradient. points = 1 □ Flooding from groundwater is an issue in the sub-basin.	1			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. □ Surface flooding problems are in a sub-basin farther down-gradient. □ Flooding from groundwater is an issue in the sub-basin. □ The existing or potential outflow from the wetland is so constrained	1			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 ■ Surface flooding problems are in a sub-basin farther down-gradient. points = 1 □ Flooding from groundwater is an issue in the sub-basin. □ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland	1			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. □ Surface flooding problems are in a sub-basin farther down-gradient. □ Flooding from groundwater is an issue in the sub-basin. □ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why	1			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. □ Surface flooding problems are in a sub-basin farther down-gradient. □ Flooding from groundwater is an issue in the sub-basin. □ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why □ There are no problems with flooding downstream of the wetland.	1			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. □ Surface flooding problems are in a sub-basin farther down-gradient. □ Flooding from groundwater is an issue in the sub-basin. □ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why □ There are no problems with flooding downstream of the wetland. □ The existing or potential outflow from the water stored by the wetland cannot reach areas that flood. Explain why □ There are no problems with flooding downstream of the wetland. □ The existing or potential outflow from the water stored by the wetland points = 0	0			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. □ Surface flooding problems are in a sub-basin farther down-gradient. □ Flooding from groundwater is an issue in the sub-basin. □ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why □ There are no problems with flooding downstream of the wetland.	0			

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These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 0 □ Emergent 3 structures: points = 2☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 ☐ Occasionally flooded or inundated 2 types present: points = 1 ☑ Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 0 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 1 **None** = 0 points Low = 1 point**Moderate** = 2 points All three diagrams in this row are **HIGH** = 3 points

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H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of	
points.	
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☐ Standing snags (dbh > 4 in) within the wetland	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	
least 33 ft (10 m)	2
Stable steep banks of fine material that might be used by beaver or muskrat for denning	
(> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)	
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas	
that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see	
H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	4
Rating of Site Potential If Score is: ☐ 15 - 18 = H ☐ 7 - 14 = M ☑ 0 - 6 = L Record the rating or	
Training of other otential in ocole is. 13 - 10 - 11 17 - 14 - 18 0 - 0 - 12 Necola the lating of	r the mat page
H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).	T
Calculate:	
0 % undisturbed habitat + (14 % moderate & low intensity land uses / 2) = 7%	
70 diffusion bed flabitat 1 (
If total accessible habitat is:	0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1	
< 10 % of 1 km Polygon points = 0 H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate:	
0 % undisturbed habitat + (32 % moderate & low intensity land uses / 2) = 16%	
o 70 diffusion bed flushed in (
Undisturbed habitat > 50% of Polygon points = 3	1
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 50% of 1km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If Score is: 4-6=H 1-3=M <<1=L Record the rating or	
	, •
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
☑ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any plant	
or animal on the state or federal lists)	
☐ It is mapped as a location for an individual WDFW priority species	2
☐ It is a Wetland of High Conservation Value as determined by the	
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If Score is: \bigcirc 2 = H \bigcirc 1 = M \bigcirc 0 = L Record the rating or	ı ure ilisi bade

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WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
V	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158 – see web link above</i>).
V	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
V	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report</i> – see web link on previous page).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Criteck off any criteria that apply to the wetland. List the category when the appropriate criteria are met. SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal. Vegetated, and With a salinity greater than 0.5 ppt Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under VNAC 323-30-1517 Asserting than 1.5 ppt 1.5 p	Wetland	Туре	Category			
SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt Yes - Co to SC 1.1	Chock of	f any critoria that apply to the wetland. List the category when the appropriate critoria are mot				
Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt Yes - Go to SC 1.1 No = Not an estuarine wetland SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-1517 Reserve designated under WAC 332-30-1517 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are Spazina, see page 25) At least 3x of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Reserved their wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/hhp/refdesk/datasearch/whp.wetlands.pdf SC 2.4. Has WDNR identified the wetland within the ST/R as a Wetland of High Conservation Value and listed in on their website? Yes = Category I No = Not WHCV SC 2.4. Has WDNR identified the wetland within the ST/R as a Wetland of High Conservation value and listed in on their website? Yes = Cot SC 3.3. No = Not WHCV SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and						
The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt Yes - Cot to SC 1.1	00 1.0.1					
Vegetated, and Vith a salinity greater than 0.5 ppt Yes - Go to SC 1.1 No = Not an estuarine wetland		_				
With a salinity greater than 0.5 ppt						
Yes - Go to SC 1.1 No = Not an estuarine wetland						
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25) At least ½ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. The wetland fast at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value (WHCV) SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/hhp/refdesk/datasearch/wnhpwetlands.pdf Yes - Contact WNHP/WDNR and to SC 2.4 No = Not WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not WHCV SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions. SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are flo		,,,				
Reserve designated under WAC 332-30-151? Yes = Category I	SC 1.1.					
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25) At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I		Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific				
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The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25) At least ⅓ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes = Go to SC 2.2 No - Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/inhp/refdesk/datasearch/wnhpwetlands.pdf Yes - Contact WNHPWNNR and to SC 2.4 No = Not WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions. SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes - Go to SC 3.3 No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes - Go to SC 3.3 No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug		☐ Yes = Category I ☐ No - Go to SC 1.2				
and has less than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25) At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I	SC 1.2.	· · · · · · · · · · · · · · · · · · ·				
Spartina, see page 25 At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I		The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,				
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 ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? 	SC 3.3.					
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SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?						
western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	SC 3.4	· · · · · · · · · · · · · · · · · · ·				
spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	0.1.					
in Table 4 provide more than 30% of the cover under the canopy?						
		☐ Yes = Is a Category I bog ☐ No = Is not a bog				

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-200	
	years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
_	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing),	
	and has less than 20% cover of aggressive, opportunistic plant species (see list of	
	species on p. 100).	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
SC 6 0	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland based on its habitat functions.	
	In practical terms that means the following geographic areas: Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.	Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form	
	(rates H,H,H or H,H,M for the three aspects of function)?	
	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and	
	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
Catego	ry of wetland based on Special Characteristics	
If you a	nswered No for all types, enter "Not Applicable" on Summary Form	



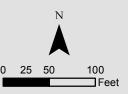
Legend

Palustrine Scrub-Shrub

Palustrine Forested

Other Project Wetlands

Stream Centerlines (Approximate)



2014 Updated Washington State **Wetland Rating System** Coal Creek Sewer Trunk Upgrade Wetland: G

Figure 1. Vegetation Map Questions: D1.3, H1.1, H1.4





Wetland Rating System

150 Feet

Coal Creek Sewer Trunk Upgrade Wetland: G

Figure 2. Hydroperiods, Outlet, and 150-foot Boundary Map Questions: D1.1, D1.4, D2.2, D4.1, D5.2, H1.2

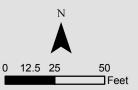


Legend

Contributing Basin

Project Wetlands

City of Bellevue Drainage Basin



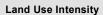
2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: G

Figure 3. Contributing Basin Questions: D4.3, D5.3







 \square

Low and Moderate (14% accessible; 32% total)



High (68% total)



Accessible



0.125 0.25 0.5 Kilometers

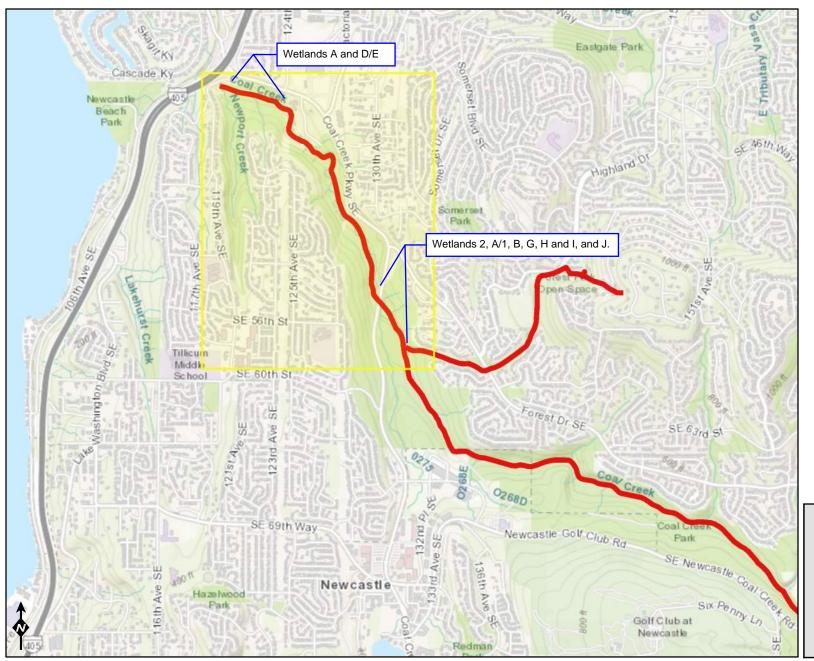
2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: G

Figure 4. 1 KM Polygon Questions: H2.1, H2.2, H2.3



Water Quality - 303d



Assessed Waters/Sediment

Water

Category 5 - 303d

Category 4C

🤎 Category 4B

Category 4A

Category 2

Category 1

Sediment

Category 5 - 303d

ZZZ Category 4C

ZZZ Category 4B

ZZZZ Category 4A

Category 2

ZZZ Category 1

2014 Updated Washington State
Wetland Rating System
Coal Creek Sewer Trunk Upgrade
Wetland: ALL

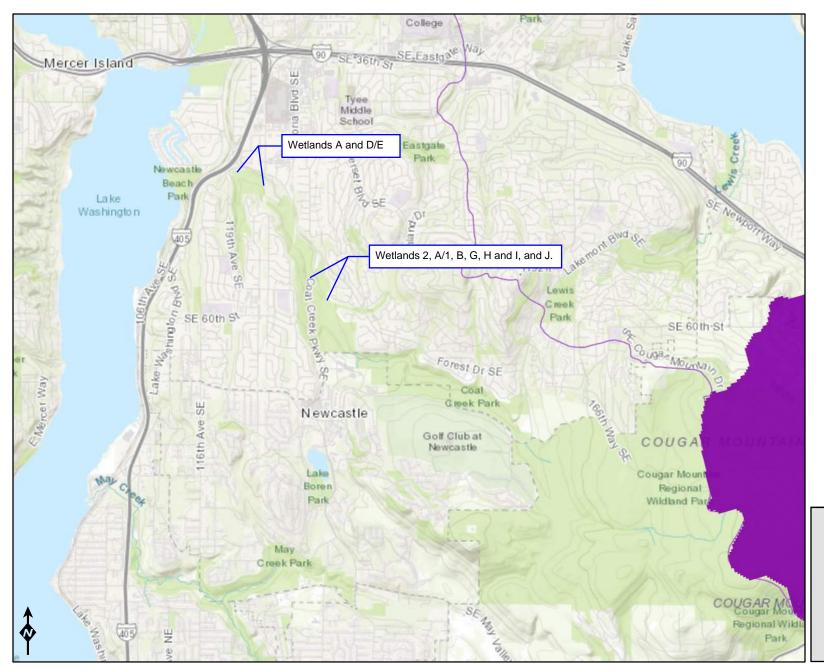
Figure 5. Water Quality - 303d (Figure 4. for Wetland J) Questions: D3.1, D3.2







Water Quality - TMDL



WQ Improvement Projects

- Approved
- In Development
- Sub-Watershed (12 digit HUC)

While there is no Ecology TMDL project ongoing for Coal Creek, the 1987 Coal Creek Basin Plan discusses water quality and sediment loading within Coal Creek. There are also several active sediment ponds within and nearby the project area along Coal Creek.

2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: ALL

Figure 6. Water Quality - TMDL (Figure 5. for Wetland J) Questions: D3.1, D3.2







RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetlands H and I (single rating unit)		Date of site visit:	4/17/2019			
Rated by R. Whitson, B. O'neill	Trained by Ecology? ☑ Yes ☐ No	Date of training	Mar-15			
HGM Class used for rating Depression	nal & Flats Wetland has multipl	e HGM classes? ☑	Yes □ No			
NOTE: Form is not complete with out the figures requested (figures can be combined). Source of base aerial photo/map City of Bellevue Orthophotography (2015) OVERALL WETLAND CATEGORY (based on functions 🗹 or special characteristics 🗆)						
1. Category of wetland based on	FUNCTIONS					
		Score for each				
		function based				
		on three				
Category IV - Total score = 9 - 15		ratings				

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	L	L	L	
Landscape Potential	M	М	L	
Value	Н	М	Н	Total
Score Based on Ratings	6	5	5	16

Score for each function based on three ratings (order of ratings is not important)

9 = H, H, H
8 = H, H, M
7 = H, H, L
7 = H, M, M
6 = H, M, L
6 = M, M, M
5 = H, L, L
5 = M, M, L
4 = M, L, L
3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	2
Map of the contributing basin	D 4.3, D 5.3	3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	6

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

For questions 1 -7, the criteria described must apply to the entire unit being rated. If hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1 - 7 apply, and go to Question 8.

1. Are tr	ne water levels in the entire unit usual	ly controlled by tides	s except during floods?
✓	NO - go to 2	☐ YES - the wetla	and class is Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during per	riods of annual low f	low below 0.5 ppt (parts per thousand)?
	If your wetland can be classified as	a Freshwater Tidal I stuarine wetland a	☐ YES - Freshwater Tidal Fringe Fringe use the forms for Riverine wetlands. If and is not scored. This method cannot be
	ntire wetland unit is flat and precipitativater and surface water runoff are NC		
V	NO - go to 3 If your wetland can be classified as	a Flats wetland, use	☐ YES - The wetland class is Flats the form for Depressional wetlands.
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of At least 30% of the open water area	on the shores of a l the year) at least 20	
V	NO - go to 4	□ YES - The wetl	and class is Lake Fringe (Lacustrine Fringe)
	may flow subsurface, as sheetflow,	n be very gradual), I in one direction (ur or in a swale withou	
V	NO - go to 5		☐ YES - The wetland class is Slope
	Surface water does not pond in these ons or behind hummocks (depression	• •	cept occasionally in very small and shallow liameter and less than 1 ft deep).
	the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at lea	nnel, where it gets i	•
√	NO - go to 6		☐ YES - The wetland class is Riverine
NOTE: T	he Riverine unit can contain depressi	ons that are filled w	ith water when the river is not flooding.

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturate	ed to the surface, at
some time during the year? This means that any outlet, if present, is higher than the interio	r of the wetland.

☑ NO - go to 7	☐ YES - The wetland class is Depressional

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☑ NO - go to 8
 ☐ YES - The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

NOTES and FIELD OBSERVATIONS:

Wetlands H and I form a single rating unit because they are separated by less than 50 feet across Coal Creek. The rating unit is depressional with riverine along the creek.

DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression (QUESTION 7 on key)		
·	s = 3	
Wetland has an intermittently flowing stream or ditch, OR highly		
constricted permanently flowing outlet. Description: Des	s = 2 1	
that is permanently flowing points	s = 1	
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a		
permanently flowing ditch.	s = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic	0	
(use NRCS definitions). Yes = 4 N	o = 0	
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or		
Forested Cowardin classes):		
· · · · · · · · · · · · · · · · · · ·	s = 5	
	S = 3	
1 10	s = 1	
1 , 0 1 10	s = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description in manual.		
·	s = 4 0	
·	s = 2	
	s = 0	
Total for D 1 Add the points in the boxes a Rating of Site Potential If score is: □ 12 - 16 = H □ 6 - 11 = M □ 0 - 5 = L Record the rate		
Rating of order ordential in 30010 is. [] 12 - 10 - 11 [] 0 - 11 - In [] 0 - 3 - [] Necola the late	ing on the mat page	
D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 N	o = 0 1	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that	0	
generate pollutants? Yes = 1 N	o = 0	
1 7	o = 0 0	
D 2.4. Are there other sources of pollutants coming into the wetland that are		
not listed in questions D 2.1 - D 2.3?	1 1	
	0 = 0	
Total for D 2 Add the points in the boxes a Rating of Landscape Potential If score is: □ 3 or 4 = H ☑ 1 or 2 = M □ 0 = L Record the rate		
Training of Landscape Fotential in 30016 18. El 3 of 4 = 11 El 1 of 2 = 11 El 0 = 2 1 Note 18.	ing on the met page	
D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,	1	
	o = 0	
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	1 1	
Yes = 1 N	o = 0	
D 3.3. Has the site been identified in a watershed or local plan as important for		
maintaining water quality (answer YES if there is a TMDL for the basin in	2	
	0 = 0	
Total for D 3 Add the points in the boxes a		
Rating of Value If score is: \square 2 - 4 = H \square 1 = M \square 0 = L Record the rat	ing on the first page	

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

DEPRESSIONAL AND FLATS WETLANDS			
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degra	adation		
D 4.0. Does the site have the potential to reduce flooding and erosion?			
D 4.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression with no surface water			
leaving it (no outlet) points = 4			
Wetland has an intermittently flowing stream or ditch, OR highly			
constricted permanently flowing outlet points = 2	0		
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a			
permanently flowing ditch points = 1			
Wetland has an unconstricted, or slightly constricted, surface outlet			
that is permanently flowing points = 0			
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of			
the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the			
deepest part.			
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7	0		
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5	0		
☐ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3			
☐ The wetland is a "headwater" wetland points = 3			
Wetland is flat but has small depressions on the surface that trap water points = 1			
Marks of ponding less than 0.5 ft (6 in) points = 0			
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.			
'			
' '	0		
<u>'</u>			
The area of the basin is more than 100 times the area of the unit points = 0			
☐ Entire wetland is in the Flats class points = 5 Total for D 4 Add the points in the boxes above	0		
·	0		
Rating of Site Potential If score is: 12 - 16 = H	the first page		
D 5.0. Does the landscape have the potential to support hydrologic function of the site?			
D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0		
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	0		
Yes = 1 No = 0			
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human			
land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	1		
Yes = 1 No = 0			
Total for D 5 Add the points in the boxes above	1		
Rating of Landscape Potential If score is: \square 3 = H \square 1 or 2 = M \square 0 = L Record the rating on the figure 1.			
D 6.0. Are the hydrologic functions provided by the site valuable to society?			
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best			
matches conditions around the wetland unit being rated. Do not add points. Choose the highest			
score if more than one condition is met.			
The wetland captures surface water that would otherwise flow down-gradient into areas			
where flooding has damaged human or natural resources (e.g., houses or salmon redds):			
 Flooding occurs in a sub-basin that is immediately down- 			
gradient of unit. points = 2	1		
☑ • Surface flooding problems are in a sub-basin farther down-	ı		
gradient. points = 1			
☐ Flooding from groundwater is an issue in the sub-basin. points = 1			
☐ The existing or potential outflow from the wetland is so constrained			
by human or natural conditions that the water stored by the wetland			
cannot reach areas that flood. Explain why points = 0			
☐ There are no problems with flooding downstream of the wetland. points = 0			
D 6.2. Has the site been identified as important for flood storage or flood	0		
conveyance in a regional flood control plan? Yes = 2 No = 0	U		
Total for D 6 Rating of Value If score is: □ 2 - 4 = H ☑ 1 = M □ 0 = L Add the points in the boxes above Record the rating on	1		
	the first page		

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

6

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 n □ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 □ Seasonally flooded or inundated 3 types present: points = 2 2 ☑ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☑ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft² Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1points = 0< 5 species H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 1 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are HIGH = 3 points

Site does not meet any of the criteria above

Rating of Value If Score is: ☑ 2 = H □ 1 = M □ 0 = L

Record

Site has 1 or 2 priority habitats (listed on next page) with in 100m

Record the rating on the first page

points = 1

points = 0

watershed plan

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

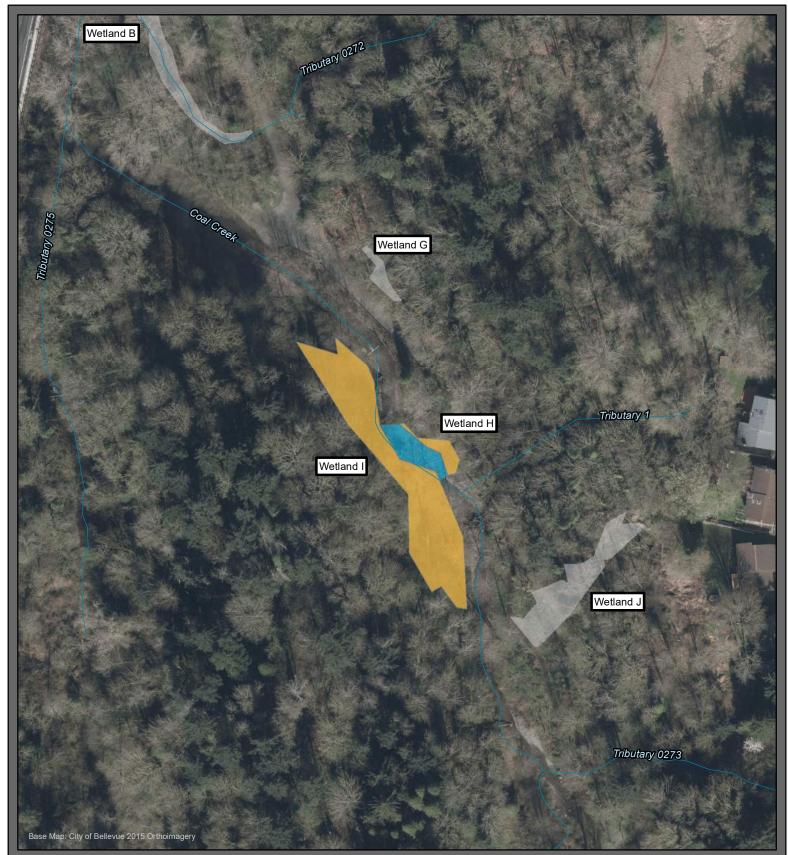
	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
V	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web <i>link above</i>).
V	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
V	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
V	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Type	Category
Check off	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
SC 1.1.	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	□ Yes = Category I □ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	
	□ Yes = Category I □ No = Category II	
SC 2.0. V	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of	
	Wetlands of High Conservation Value?	
SC 2.2.	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.		
00 2.0.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website?	
	□ Yes = Category I □ No = Not WHCV	
SC 3.0. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions .	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
00 0	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
00.00	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE: If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 20% of the sover under the capacity?	
	in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0). Forested Wetlands	
•	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
I ——————	☐ Yes = Category I ☑ No = Not a forested wetland for this section	- <u></u>
SC 5.0). Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	-	
l	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to	
l	be measured near the bottom)	
·	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
	I. Does the wetland meet all of the following three conditions?	
	$\frac{1}{3}$	
	and has less than 20% cover of aggressive, opportunistic plant species (see list of	
	species on p. 100).	
	• • • • • • • • • • • • • • • • • • • •	
_	grazed or un-mowed grassland.	
	1110 Welland 10 Kinger than 7 ₁₀ as (1885 K.)	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0	D. Interdunal Wetlands	
l	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	5	
	,	
00 6 4	☐ Yes - Go to SC 6.1 ☑ No = Not an interdunal wetland for rating	
SC 6.1	9	
l	(rates H,H,H or H,H,M for the three aspects of function)?	
50 6 5	$\Box \text{ Yes} = \textbf{Category I} \qquad \Box \text{ No - Go to } \textbf{SC 6.2}$ Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
SC 6.2	2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? ☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6 3	9 /	
SC 6.3	1 ac?	
	□ Yes = Category III □ No = Category IV	
Cated	ory of wetland based on Special Characteristics	
_	answered No for all types enter "Not Applicable" on Summary Form	



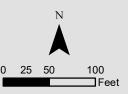
Legend

Palustrine Scrub-

Riverine Unconsolidated

Other Project Wetlands

Stream Centerlines

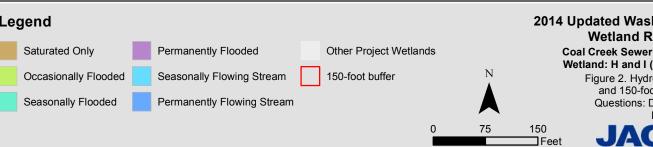


2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: H and I (one rating unit)

Figure 1. Vegetation Map Questions: D1.3, H1.1, H1.4





Coal Creek Sewer Trunk Upgrade Wetland: H and I (one rating unit) Figure 2. Hydroperiods, Outlet,

and 150-foot Boundary Map Questions: D1.1, D1.4, D2.2, D4.1, D5.2, H1.2





Contributing Basin

Project Wetlands

City of Bellevue Drainage Basin

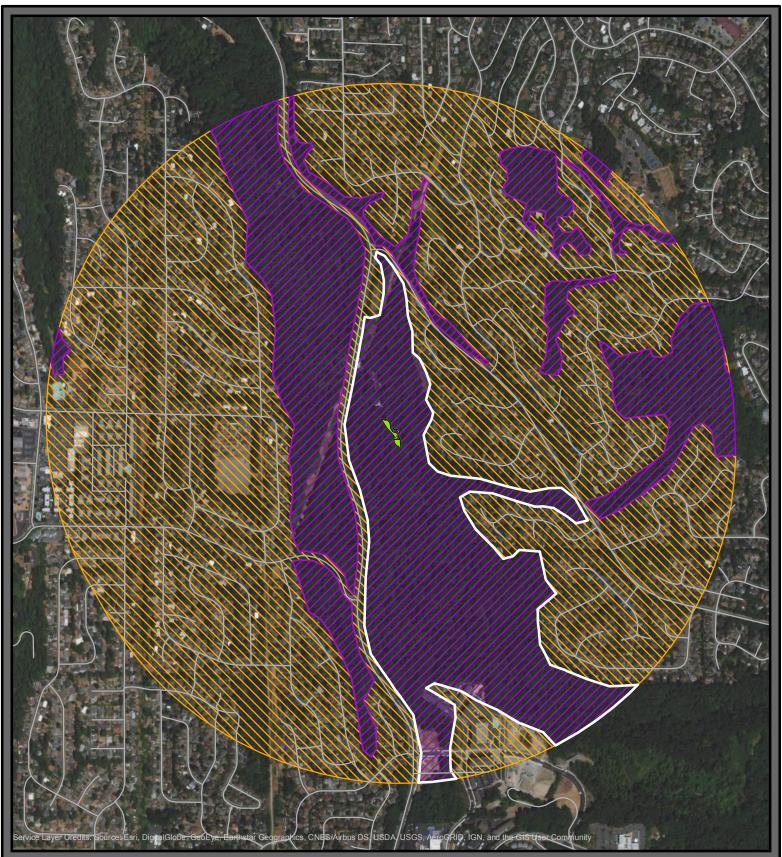


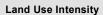
2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: H and I (one rating unit)

Figure 3. Contributing Basin Questions: D4.3, D5.3







Low and Moderate (15% accessible; 31% total)



High (69% total)



Accessible



0.125 0.25 0.5 Kilometers

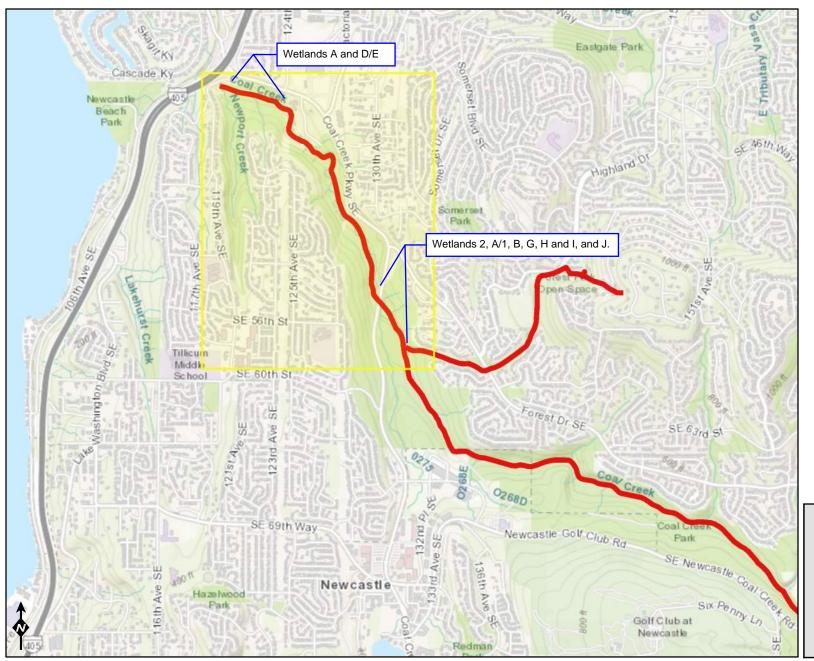
2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: H/I

Figure 4. 1 KM Polygon Questions: H2.1, H2.2, H2.3



Water Quality - 303d



Assessed Waters/Sediment

Water

Category 5 - 303d

Category 4C

🤎 Category 4B

Category 4A

Category 2

Category 1

Sediment

Category 5 - 303d

ZZZ Category 4C

ZZZ Category 4B

ZZZZ Category 4A

Category 2

ZZZ Category 1

2014 Updated Washington State
Wetland Rating System
Coal Creek Sewer Trunk Upgrade
Wetland: ALL

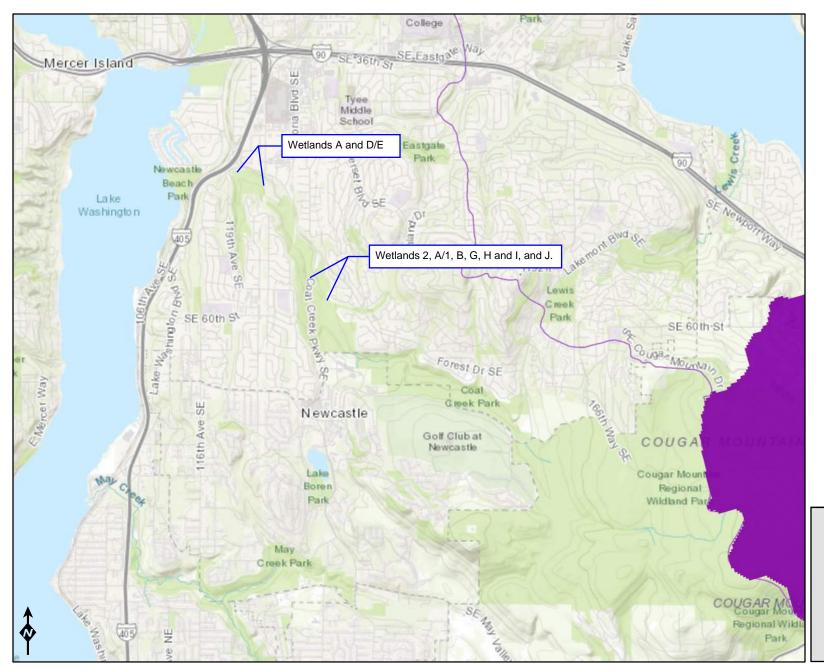
Figure 5. Water Quality - 303d (Figure 4. for Wetland J) Questions: D3.1, D3.2







Water Quality - TMDL



WQ Improvement Projects

- Approved
- In Development
- Sub-Watershed (12 digit HUC)

While there is no Ecology TMDL project ongoing for Coal Creek, the 1987 Coal Creek Basin Plan discusses water quality and sediment loading within Coal Creek. There are also several active sediment ponds within and nearby the project area along Coal Creek.

2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: ALL

Figure 6. Water Quality - TMDL (Figure 5. for Wetland J) Questions: D3.1, D3.2







RATING SUMMARY – Western Washington

Name of wetland (or ID #):	Wetland J		Date of site visit:	4/17/2019
Rated by R. Whitson and B	. O'neill	Trained by Ecology? ☑ Yes ☐ No	Date of training	Mar-15
HGM Class used for rating	Slope	Wetland has multip	ole HGM classes? ☐ `	Yes ☑ No
	•	t the figures requested (figures ca map City of Bellevue 2015 orthoima	•	
OVERALL WETLAND CA	TEGORY III	(based on functions 🗵 or spec	ial characteristics \Box)	
1. Category of wetland	I based on FUNCTI	IONS		
	Category I - Total so	core = 23 - 27	Score for each	
	Category II - Total s	score = 20 - 22	function based	
X	Category III - Total	score = 16 - 19	on three	
	Category IV - Total	score = 9 - 15	ratings	
	_		(order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	M	М	L	
Landscape Potential	M	L	L	
Value	Н	M	Н	Total
Score Based on Ratings	7	5	5	17

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	4
(can be added to another figure)		'
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	2
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	5

HGM Classification of Wetland in Western Washington

For questions 1 -7, the criteria described must apply to the entire unit being rated. If hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1 - 7 apply, and go to Question 8.

1. Are th	Are the water levels in the entire unit usually controlled by tides except during floods?				
~	NO - go to 2	☐ YES - the wetland class is Tidal Fringe - go to 1.1			
1.1	Is the salinity of the water during per	ods of annual low flow below 0.5 ppt (parts per thousand)?			
	=	Freshwater Tidal Fringe use the forms for Riverine wetlands. If tuarine wetland and is not scored. This method cannot be			
	ntire wetland unit is flat and precipitati rater and surface water runoff are NO	on is the only source (>90%) of water to it. sources of water to the unit.			
~	NO - go to 3 If your wetland can be classified as a	☐ YES - The wetland class is Flats Flats wetland, use the form for Depressional wetlands.			
	he entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of the At least 30% of the open water area	on the shores of a body of permanent open water (without any ne year) at least 20 ac (8 ha) in size;			
~	NO - go to 4	□ YES - The wetland class is Lake Fringe (Lacustrine Fringe)			
✓ ✓	he entire wetland unit meet all of the The wetland is on a slope (<i>slope car</i>). The water flows through the wetland may flow subsurface, as sheetflow, on the water leaves the wetland witho .	be very gradual), in one direction (unidirectional) and usually comes from seeps. It r in a swale without distinct banks.			
	NO - go to 5	☑ YES - The wetland class is Slope			
		pe of wetlands except occasionally in very small and shallow are usually <3 ft diameter and less than 1 ft deep).			
	he entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at least	nel, where it gets inundated by overbank flooding			
	NO - go to 6	☐ YES - The wetland class is Riverine			
NOTE: T	he Riverine unit can contain denressi	ons that are filled with water when the river is not flooding			

, , ,	depression in which water ponds, or is saturated to the surface, at any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☐ YES - The wetland class is Depressional
•	flat area with no obvious depression and no overbank flooding? han a few inches. The unit seems to be maintained by high e ditched, but has no obvious natural outlet.

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

 $\ \square$ YES - The wetland class is **Depressional**

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

Wetland name or number _____J

□ NO - go to 8

SLOPE WETLANDS		
Water Quality Functions - Indicators that the site functions to in	nprove water quality	
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 elevation for every 100 ft of horizontal distance)	ft vertical drop in	
Slope is 1% or less	points = 3	0
Slope is > 1% - 2%	points = 2	O
Slope is > 2% - 5%	points = 1	
Slope is greater than 5%	points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions):	Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollu Choose the points appropriate for the description that best fits the plants in the means you have trouble seeing the soil surface (>75% cover), and uncut mean mowed and plants are higher than 6 in.	wetland. Dense	
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	6
Dense, uncut, herbaceous plants > ½ of area	points = 3	O
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > 1/4 of area	points = 1	
Does not meet any of the criteria above for plants	points = 0	
	in the boxes above	6
Rating of Site Potential If score is: ☐ 12 = H ☐ 6 - 11 = M ☐ 0 - 5 = L	Record the rating on	the first page
S 2.0. Does the landscape have the potential to support the water quality functi	ion of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?		1
Other Sources dogs, associated with lawns and houses	Yes = 1 No = 0	
Total for S 2 Add the points	s in the boxes above	1
Rating of Landscape Potential If score is: ☑ 1 - 2 = M □ 0 = L	Record the rating on	the first page
S 3.0. Is the water quality improvement provided by the site valuable to society	?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	1
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list.	Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in		2

Rating of Value If score is: \square 2 - 4 = H \square 1 = M \square 0 = L

Record the rating on the first page

 $Yes = 2 \quad No = 0$

Add the points in the boxes above

which the unit is found?

Total for S 3

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion		
S 4.0. Does the site have the potential to reduce flooding and stream erosion?		
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect during surface flows.		1
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	
Rating of Site Potential If score is: ☑ 1 = M □ 0 = L	Record the rating on	the first page
S 5.0. Does the landscape have the potential to support hydrologic functions of	the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	Yes = 1 No = 0	0
Rating of Landscape Potential If score is: □ 1 = M ☑ 0 = L Record the rating on		the first page
S 6.0. Are the hydrologic functions provided by the site valuable to society?		
S 6.1. Distance to the nearest areas downstream that have flooding problems:		
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)	points = 2	1
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
Total for S 6 Add the points	in the boxes above	1
Rating of Value If score is: 2 - 4 = H 1 = M 0 = L	Record the rating on	the first page

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 0 Emergent 3 structures: points = 2☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 \Box Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 0 ☐ Occasionally flooded or inundated 2 types present: points = 1 ☑ Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 **None** = 0 points Low = 1 point**Moderate** = 2 points All three diagrams in this row are **HIGH** = 3 points

H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies?	Choose	
only the highest score that applies to the wetland being rated.		
Site meets ANY of the following criteria:	points = 2	
☑ It has 3 or more priority habitats within 100 m (see next page)		
□ It provides habitat for Threatened or Endangered species (any plant		
or animal on the state or federal lists)		
☐ It is mapped as a location for an individual WDFW priority species		2
□ It is a Wetland of High Conservation Value as determined by the		2
Department of Natural Resources		
□ It has been categorized as an important habitat site in a local or		
regional comprehensive plan, in a Shoreline Master Plan, or in a		
watershed plan		
Site has 1 or 2 priority habitats (listed on next page) with in 100m	points = 1	
Site does not meet any of the criteria above	points = 0	

Record the rating on the first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

	ow many of the following priority habitats are within 330 ft (100 m) of the wetland unit: NOTE : This is independent of the land use between the wetland unit and the priority habitat.
	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
V	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158 – see web link above</i>).
V	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
V	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
V	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	I Туре	Category
Chook of	fany aritaria that apply to the walland. List the actoriary when the appropriate aritaria are mot	
	f any criteria that apply to the wetland. List the category when the appropriate criteria are met. Estuarine Wetlands	
30 1.0.	Does the wetlands meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of	
	Wetlands of High Conservation Value?	
	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
0000	☐ Yes = Category I ☑ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
30 2.4.	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0.		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	□ Yes - Go to SC 3.3 □ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE: If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	1
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	1
	spruce, or western white pine, AND any of the species (or combination of species) listed	
	in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

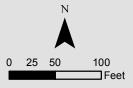
SC 4.0	. Forested Wetlands		
•	Does the wetland have at least 1 contiguous acre of forest that meets one of these		
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>		
	answer YES you will still need to rate the wetland based on its functions.		
		1	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	1	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height		
	(dbh) of 32 in (81 cm) or more.		
	years old OR the species that make up the canopy have an average diameter (dbh)		
	exceeding 21 in (53 cm).		
l		!	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section		
SC 5.0	. Wetlands in Coastal Lagoons		
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	!	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially		
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,		
	rocks		
	1 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
l	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to		
l	be measured near the bottom)		
· 1	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon		
	. Does the wetland meet all of the following three conditions?		
	\mathbf{y}		
	and has less than 20% cover of aggressive, opportunistic plant species (see list of		
	species on p. 100).		
	, , ,		
	grazed or un-mowed grassland.		
	The treatment is larger than 7 ₁₀ as (1888 tt.)		
	☐ Yes = Category I ☐ No = Category II		
SC 6.0	. Interdunal Wetlands		
l	Is the wetland west of the 1889 line (also called the Western Boundary of Upland		
İ	Ownership or WBUO)? If you answer yes you will still need to rate the wetland		
l	based on its habitat functions.		
	In practical terms that means the following geographic areas:		
	, , , , , , , , , , , , , , , , , , , ,		
OO 6 1	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form		
SC 6.1	. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?		
l	(rates H,H,H or H,H,W for the three aspects of function)? $\Box \text{ Yes} = \textbf{Category I} \qquad \Box \text{ No - Go to } \textbf{SC 6.2}$		
SC 6.2	g ,		
30 0.2	. Is the wetland if ac of larger, of is it in a mosaic of wetlands that is if ac of larger? $\Box \text{ Yes} = \textbf{Category II} \qquad \Box \text{ No - Go to } \textbf{SC 6.3}$		
SC 6.3			
30 0.0	1 ac?		
	☐ Yes = Category III ☐ No = Category IV		
Category of wetland based on Special Characteristics			
_	enswered No for all types enter "Not Applicable" on Summary Form	i	

Legend

Palustrine Emergent

Other Project Wetlands

— Stream Centerlines (Approximate)



2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: J

> Figure 1. Vegetation Map Questions: S1.3, S4.1, H1.1, H1.4





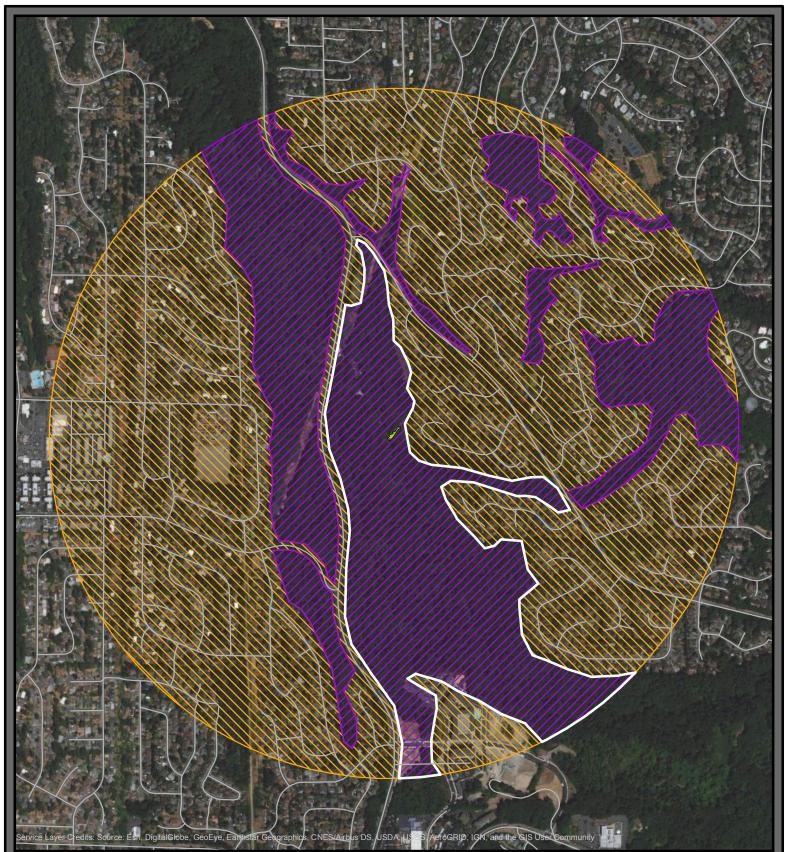
Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: J

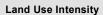
150

□Feet

Figure 2. Hydroperiods and 150-foot Boundary Map Questions: S2.1, S5.1, H1.2







Low and Moderate (15% accessible; 32% total)



High (68% total)



Accessible



0.125 0.25 0.5 Kilometers

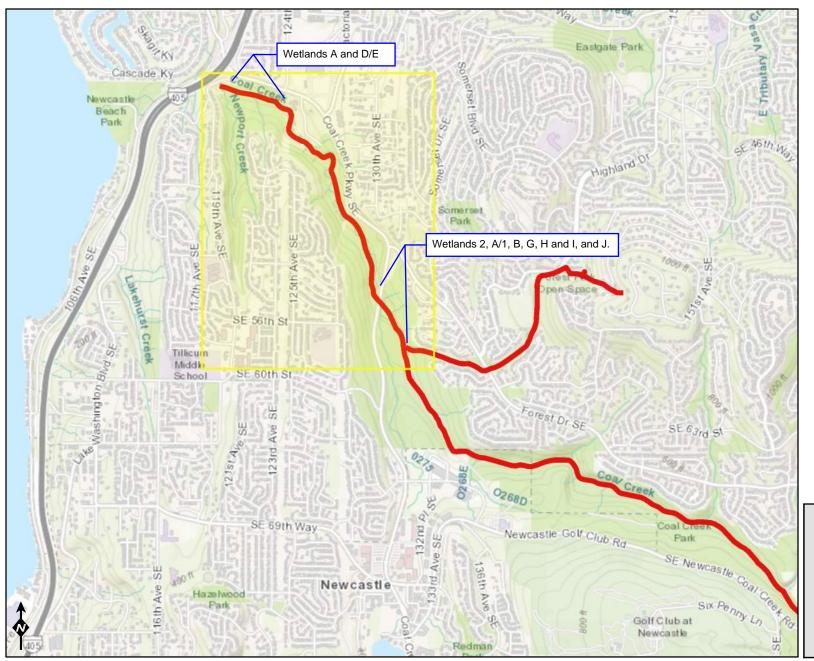
2014 Updated Washington State Wetland Rating System

Coal Creek Sewer Trunk Upgrade Wetland: J

Figure 3. 1 KM Polygon Questions: H2.1, H2.2, H2.3



Water Quality - 303d



Assessed Waters/Sediment

Water

Category 5 - 303d

Category 4C

🤎 Category 4B

Category 4A

Category 2

Category 1

Sediment

Category 5 - 303d

ZZZ Category 4C

ZZZ Category 4B

ZZZZ Category 4A

Category 2

ZZZ Category 1

2014 Updated Washington State
Wetland Rating System
Coal Creek Sewer Trunk Upgrade
Wetland: ALL

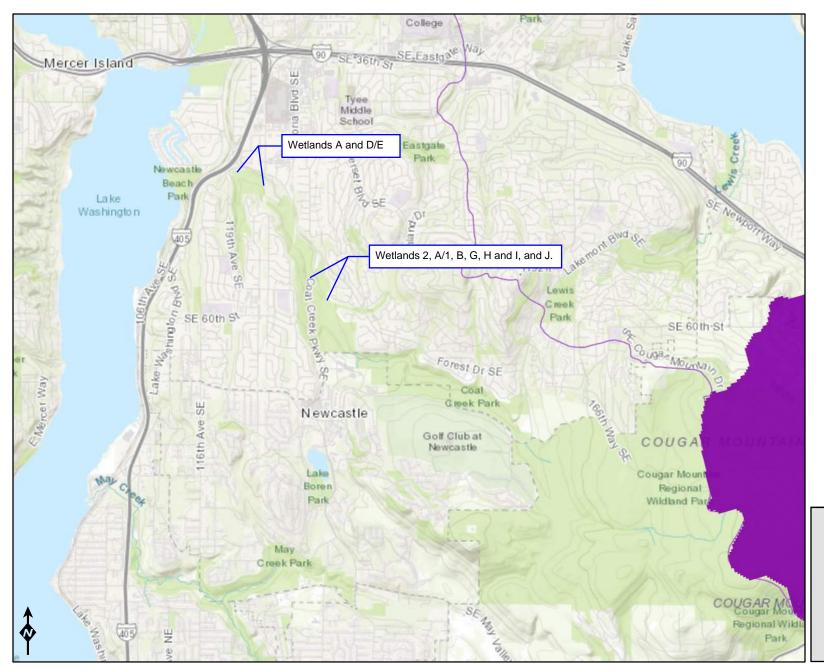
Figure 5. Water Quality - 303d (Figure 4. for Wetland J) Questions: D3.1, D3.2







Water Quality - TMDL



WQ Improvement Projects

- Approved
- In Development
- Sub-Watershed (12 digit HUC)

While there is no Ecology TMDL project ongoing for Coal Creek, the 1987 Coal Creek Basin Plan discusses water quality and sediment loading within Coal Creek. There are also several active sediment ponds within and nearby the project area along Coal Creek.

2014 Updated Washington State Wetland Rating System Coal Creek Sewer Trunk Upgrade Wetland: ALL

Figure 6. Water Quality - TMDL (Figure 5. for Wetland J) Questions: D3.1, D3.2





